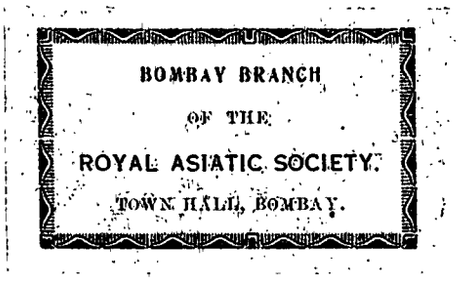
Progress Report

Forest Administration, in the Andamans.

1902-03 to 1906-07



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PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR 1902-03. to 1906-07

2/2/1

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CALCUTTA:
OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1904.

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PROGRESS REPORT

OF

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IN THE

ANDAMANS

FOR

1902-03.

2/2/1

CALCUTTA:
OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1903.

CALCUTTA:
GOVERNMENT OF INDIA CENTRAL PRINTING OFFICE,
8, HASTINGS STREET.

No. $\frac{354}{220\text{-}2}$ F., dated Calcutta, the 16th March 1904.

File No. 220 of 1903.
Serial No. 2.

From—J. WILSON, Esq., C.S.I., Secretary to the Government India,

To—The Superintendent of Port Blair.

I AM directed to acknowledge the receipt of your letter No. 1305, dated 7th October 1903, forwarding the Report on Forest Administration in the Andamans for the year 1902-3.

2. The gross revenue of the year was considerably larger than in 1901-2, but the expenditure also increased, so that the net surplus is still in unsatisfactory proportion to the gross income. The Government of India agree that a somewhat large expenditure was necessary in the past to provide for the transport of forest produce for Settlement use and for expenditure, but they consider that in the future capital expenditure should be most carefully controlled, while at the same time no endeavour should be spared to make forest operations remunerative.

3. The increase in the outturn of timber during the year has been noted with interest, and it is observed that this was in some measure due to the improved methods of sea rafting introduced by the Forest officer.

In this regard it is suggested for your consideration whether it may not be desirable to free the Deputy Conservator from such Settlement duties as do not require the supervision of an expert in forestry, such, for instance, as the charge of the Chatham Saw-mill. With an anticipated increase both in export of padouk and in plantation work, that officer's time could doubtless be fully occupied in the improvement of the forest and in supervising the extraction of its yield.

4. The Government of India learn with satisfaction that the work of the Department has earned your approbation, and they trust that in the coming year good progress will have been made in carrying out the policy laid down in Mr. Miller's letter No. 1074-F., dated the 8th September 1903.

G. I. C. P. O.—No. 4337 R. & A.—25-3-1904.—220—R. B.

No. 1305, dated Port Blair, the 7th October 1903.

From—F. E. TUSON, ESQ., *Offg. Superintendent of Port Blair,*

To—*The Secretary to the Government of India,* DEPARTMENT OF REVENUE AND AGRICULTURE.

I have the honour to submit, for the information of the Government of India, the Annual Report of the Deputy Conservator of Forests, Andamans, for the year 1902-03.

2. The report is so clear and concise that it is unnecessary for me to make any remarks on it.

3. Mr. C. G. Rogers, F. C. H., performed his duties to my entire satisfaction, and has shown zeal and ability in all he has undertaken.

No. 1263, dated Port Blair, the 30th September 1903.

From—C. G. ROGERS, ESQ., F. C. H., *Deputy Conservator of Forests, Andamans,*

To—*The Superintendent, Port Blair.*

I have the honour to forward herewith the Annual Report of Forest Administration in the Andamans for 1902-03 in accordance with provisions of Chapter IV, Part V, of the Forest Department Code.

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PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1902-03.

CHAPTER I.

EXTENSION AND CONSTITUTION OF STATE FORESTS.

I.—Alteration of areas.

1. Form No. 46 shows that the area of the reserved forests has remained unaltered, and that 4 acres of unclassed forest has been cleared in the orthern District for cultivation.

II.—Forest Settlements.

2. No forest settlements were made during the year.

III.—Demarcation.

3. No boundaries have been cleared and no new demarcations have been undertaken this year owing to scarcity of labour.

As all the land outside the reserved forests belongs to Government, the demarcation of the forests is not so important as in other parts of India where private properties adjoin the Government reserved forests.

IV.—Surveys.

4. No survey has been made during the year by the Forest Survey Branch.

The areas of the plantations have been determined and positions of fuel and timber tramways have been entered on the existing maps.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—Regulation and management.

(*a*) WORKING-PLANS AND THEIR CONTROL.

5. No working-plans have as yet been made for the Andamans forests.

6. Linear valuation surveys were made in the forests between Lokotot Joinga and Port Meadows during the months of December 1902, January, February, and March 1903, through 3,168 acres of the Port Meadows and Middle Strait Reserve similarly to those made last year at a cost of Rs. 225.

Trees were enumerated over an area of 340 acres or 10·7 per cent. of the area of forest examined.

(*b*) ANNUAL PLANS OF OPERATIONS.

7. The Government of India's review on the annual report for 1901-02 was received too late to allow of an annual plan of operations being drawn up for the year under review.

II.—Working of the year.

(*a*) COMMUNICATIONS AND BUILDINGS.

Roads, etc.

8. The total expenditure on tramways shown in Form 51 is Rs. 10,410 as compared with Rs. 7,500 in 1901-02. Of this sum Rs. 9,787 was spent on new works and Rs. 623 on maintenance of existing lines; Rs. 8,040 was spent on the Wimberley Gunj steam tramway. The length of the track was not increased during the year, and only about ½ mile of the existing track was regraded. The progress made was slow owing to the construction of heavy embankments and cuttings.

Some of the labour was taken off this work to push on the Anikhet Temple Gunj tramway extension which was more urgently required.

One two span masonry bridge, 12 culverts, one sluice gate and 512 feet of revetment walls in a heavy cutting were also made during the year.

A sum of Rs. 41,236 debited to A. I. *a* was spent on the purchase of 6 miles of portable tramway (weight of rail 18 lbs. to the yard), rolling stock, buffaloes and the preparation of 6¾ miles of track during the year. The tramway was temporarily laid from Anikhet to Temple Gunj.

The cost of the maintenance of temporary fuel and timber lines debited to A. I. *a* and A. I. *b* was Rs. 5,419, of which Rs. 3,563 was spent on material and Rs. 1,856 on the preparation of new and the maintenance of existing tramways.

During the year 4½ miles of new temporary and ½ mile of new permanent tramway track were made for the extraction of timber and 5¼ miles for fuel extraction tracks, while 4½ miles of new tram lines were actually laid, one mile of temporary track being taken up. Labour was supplied free for the construction and maintenance of fuel lines.

The length of existing temporary tramways at the close of the year is as follows:—

	Miles.
Wimberley Gunj Timber Tramway ...	4
Shaitan Khari Anikhet Temple Gunj Timber Tramway	6½
Shaitan Khari Fuel Tramway	2¼
Namunaghar Fuel Tramway	3
Total ...	15¾

Buildings.

9. The expenditure on buildings during the year was Rs. 2,246, as compared with Rs. 1,540 in the previous year. Of this sum Rs. 1,324 was spent on new works and Rs. 922 upon repairs to existing buildings.

New temporary convict barracks were built at Anikhet, Namunaghar, Wimberley Gunj, Lokotat Joinga, North Bay, Madhoban, Bindraban, Cadell Gunj, Ali Musjid and Tusonabad.

Temporary rest-houses were built at Jatang, Lokotat Joinga, Namunaghar, Madhoban and Cadell Gunj.

The Range head-quarters, engine-driver's house, assistant engine-driver's house, engine shed and truck-shed at Wimberley Gunj were shingled during the year.

(*b*) Protection of forests from injury.

(*1*) *General protection and breaches of Forest Rules.*

10. Form No. 52 shows that 4 cases concerning 4 persons were taken into court during the year. Two were for illegal removal of timber and two for illegal removal of minor produce. Two men were acquitted and two convicted.

(*2*) *Protection from fire.*

11. There were no fires in the reserved or unclassed forests during the year.

No special measures to protect the forests from fire were undertaken. The grazing grounds adjoining the forests are not burnt and the principal crop in the islands being rice, there is little danger of fires spreading into the reserved forests from outside.

By far the greater proportion of the forest reserves in the Andamans consist of pathless primeval evergreen forests, which canes, creepers, and a dense undergrowth render practically impenetrable; they are in consequence little liable to injury from fire.

(*3*) *Regulation of grazing and protection from cattle.*

12. Though all the reserved forests are open to grazing practically no cattle enter them, as the villages have ample grazing grounds and there is little or nothing for the cattle to eat in the reserved forests.

(*c*) Improvement of Forest growth.

(*1*) *Natural Regeneration.*

13. Some padouk and a few pyimma (*Lagerstræmia hypoleuca*) and White Chuglam (*Terminalia bialata*) seedlings were observed in the forests in the neighbourhood of Lokotot Joinga, in the Port Meadows Reserve, and near Baruatang and Yaratang in the Mount Harriet Reserve, while some natural seedlings of Gangow (*Mesua Ferrea*), Thitmin (*Podocarpus neriifolia*), Thingan (*Hopea odorata*) and Bombway (*Terminalia procera*) were noticed at Mahdoban.

The completeness of the leaf canopy and the presence of creepers will in all probability retard these seedlings from developing into trees.

(*2*) *Artificial Reproduction.*

14. Form No. 56 shows that the total area of plantation has increased by 4 acres. The actual area planted during the year amounted to 154 acres. Of this 141 acres were added to the Dhani Khari Mangrove plantation at a cost of Rs. 775; and an area of 13 acres near Wimberley Gunj in the Mount Harriet Reserve was cleared at a cost of Rs. 239 and prepared for sowing padouk seed at stake after the manner of the teak *Taungyas* in Burma. The cost is unusually large owing to the work having been undertaken late in the season.

Regular plantations.

15. The total area of forest in which cultural operations have been made has been reduced by 1,411 acres. The Goplakabang area was found on survey to be under-estimated by 47 acres; while the padouk line plantations of 1892,

Cultural operations.

1893 and 1894 at Dhani Khari, Chouldari and Munglutan shown as the Dhani Khari lines in Form No. 56 have been excluded. These lines were cleared this year for the first time since 1895-96 at a cost of Rs. 730, and after their inspection by Mr. Eardley-Wilmot, officiating Inspector General of Forests (then Conservator of Forests, Pegu Circle), it was determined to abandon them, as the tree planted had been so much injured by the surrounding Forest creepers and undergrowth which had sprung up, that it was not considered advisable to spent any more money on them.

The small Mahogany plantation in Namunaghar is doing well and the head of the seedlings are now free. The padouk sowings were not so successful.

(3) *Early Thinnings.*

16. No early thinnings were made during the year.

(4) *Other operations for the improvement of the growing stock.*

17. No operations coming under this head have been carried out this year.

(5) *Experiments.*

18. No experiments with exotics have been made during the year.

(d) Exploitation of Major Produce.

19. (1) No clear or regeneration fellings, (2) selection fellings, (3) improvement fellings, or (4) coppice fellings have been made during the year.

(5) *Unregulated Fellings.*

20. The volume of timber removed by departmental agency and the forests from which it was cut is shown in the subjoined table :—

Removal of timber by departmental agency.

Name and class of forest worked.	Forest depot to which the produce was brought.	Volume of timber extracted in cubic feet solid.	Remarks.
	Reserved Forests.		
Mount Harriet	Wimberleygunj	8,211	Wimberley Gunj Range.
Do.	Mahdoban	48,255	
Do.	Perij	17,486	
Do.	Yaratang	71,302	
Do.	Baruatang	6,938	
Port Meadows	Lokotot Joinga	115,027	
Middle Strait	Port Meadows	10,841	
Alimasjid	Macpherson Straits (Sukhanadi).	20,406	Anikhet Range.
	Unclassed Forests.		
North Bay	North Bay	612	
Anikhet	Shaitan Khari	56,186	
Namunaghar	Namunaghar Quarry	62,087	
Mitha Khari	Mitha Khari	4,228	
Cadellgunj	Shaitan Khari	70	
Hobdaypore	Do.	20	
Manpore	Do.	571	
	Total	422,240	

Removal of fuel by departmental agency.

21. The volume of firewood removed by departmental agency for the supply of the Settlement and the areas from which it was cut are shown below :—

Locality worked.	Number of cords removed other than mangrove.						Remarks.
	2 feet billets.		4 feet billets.		Total.		
	Cords.	C. ft. solid.	Cords.	C. ft. solid.	Cords.	C. ft. solid.	
Reserved Forests.							*Supplied to Northern District.*
Madhoban . . .	577	50,487	...	...	577	50,487	Cords.
Total removed from Reserved Forests . .	577	50,487	...	...	577	50,487	2 feet billets . 2,053 4 „ . 5,687 Total . 7,740 or 677,250 cubic feet solid.
Unclassed forests.							
North Bay . . .	1,198	104,825	...	...	1,198	104,825	
Namnaghar . .	...	...	3,454	302,225	3,454	302,225	
Bindraban . . .	...	...	5,877	514,238	5,877	514,238	
Chatham Saw-Mill . .	232	20,300	...	...	232	20,300	Supplied to Southern District.
Total removed from unclassed forests . .	1,430	125,125	9,331	816,463	10,761	941,588	Cords. 4 feet billets . 3,288 or 287,700 cubic feet solid.
Grand Total .	2,007	175,612	9,331	816,463	11,338	992,075	

The quantity of mangrove fuel (2 feet billets) was 2,540 cords less and that of 2 feet billets of other species 116 cords more than last year. The outturn of fuel other than mangrove (4 feet billets) was 69 cords less and the quantity of fuel supplied from the Chatham Saw-Mills was also 136 cords less.

No mangrove fuel was cut during the year. The demand for this class of fuel has for the time being ceased to exist, owing to the use of coal in all Settlement launches and at the Phoenix Bay Workshops.

There are no cases of short work during the year, and only seven men were tried for refusing to do their allotted task; they, however, made good the wood short cut.

Removal of timber and firewood by purchasers.

22. The volume and kind of timber removed from unclassed forests during the year is shown in the subjoined table together with the localities from which the timber was extracted :—

Locality worked.	SPECIES OF TREES EXTRACTED AND THEIR YIELD.								Remarks.
	Lakuch.		Other second class trees.		Gorjan.		Other third class trees.		
	Number of trees cut.	Yield of sawn timber, cubic feet.	Number of trees cut.	Yield of sawn timber, cubic feet.	Number of trees cut.	Yield of sawn timber, cubic feet.	Number of trees cut.	Yield of sawn timber, cubic feet.	
Cadell Gunj	2	145	...	...	4	645	2	138	
Bhagail Singhpura	...	...	...	...	1	...	1	41	
Stewart Gunj	...	...	...	...	6	1,355	...	...	
Goracharma	2	81	...	...	8	3,348	...	...	
Taylerabad	...	...	...	...	7	1,224	...	...	
Manpore	...	...	...	...	10	1,022	...	...	
Rangachang	4	144	...	...	13	3,238	4	137	
Bumtitan	1	27	...	...	7	583	1	102	
Anikhet	...	...	...	...	2	49	...	...	
Chouldari	...	...	...	...	3	...	...	...	
Sipighat	1	55	...	...	2	842	1	47	
Bamboo Flat	...	...	...	...	2	...	...	...	
Austinabad	1	27	...	...	2	188	...	...	
Wimberley Gunj	...	...	...	...	2	...	...	...	
Temple Gunj	...	...	...	...	3	...	...	...	
Brookesabad	...	...	...	...	...	...	2	58	
Minnie Bay	...	...	...	...	...	...	2	61	
Port Mouat	...	...	...	...	...	...	...	...	
Birch Gunj	...	...	...	...	...	...	...	...	
Total ...	11	479	...	...	72	12,494	13	584	=13,557

The quantity of fuel extracted was the same as in 1901-02.

(*e*) Extraction and transport of Major Forest produce by land and water.

(*1*) *Timber.*

23. The volume of timber removed by Government agency during the year is 96 per cent. of the total volume of timber removed from the forests (excluding that removed from unclassed forests by free grantees and the District Officers), and the revenue derived from it is 99 per cent. of the total revenue received.

The timber extracted by departmental agency is removed from the forests in the log and brought to Port Blair for conversion or export.

The forests situated on the slopes draining into the harbour having been worked out, the difficulty of getting timber to Port Blair is increasing every year, as more and more distant and more and more inaccessible forests have to be exploited.

24. Rafting has been persisted with throughout the year, not only in the sheltered Shoal Bay Creek, but also in the open sea, protected by Ritchies archipelago, and much valuable experience has been gained. The method of raft construction has been materially improved, and chains are gradually being substituted for ropes.

Rafts have been towed throughout the year from the sea face of the Mount Harriet reserve in the open sea from Yoratang to Katatang in Shoal Bay Creek and from Barnatang and Mahdoban direct to Port Blair, on several occasions principally during the south-west monsoon the sea was too rough and the swell too high to allow of the rafts being towed; they even broke up at the coast depots and had to be remade and were towed when the swell subsided.

The Mount Harriet Reserve sea face is sheltered by Ritchies archipelago and rafting is possible from this reserve when it would be extremely difficult if not impossible from a coast exposed to the full unbroken face of the Andaman sea during the south-west monsoon.

In the months of March and April the season between the south-west and north-east monsoons, rafts were towed to Port Blair in the open sea from Port Meadows (a distance of 20 miles north) and Sukha Nadi in Macphersons Strait Alimusjid reserve (16 miles south), but on the commencement of the south-west monsoon towing for such long distances in the exposed open sea became impossible, and rafting from these places had to be given up owing to the risk of the rafts being broken and the logs lost.

During the year 1,659 logs measuring about 2,000 tons have been rafted in the open sea, and of these 38 have been lost in transit. Of these however 23 were recovered.

The average distance the logs were towed in the open sea was 10 miles varying from 4 to 15 miles under normal conditions.

The experience gained during the year shows that rafts containing 50 to 60 logs can be towed in the open sea practically all the year round, except when the wind is unusually strong and the swell in consequence very high if protected by outlying islands, but not otherwise, and that the maximum distance logs can be towed in a day in the open protected sea is from 10 to 15 miles. Rafting in the open sea is a dangerous proceeding and is one which could not safely be adopted as the permanent principal method of transport in these islands.

25. The cost of extraction has been reduced owing to the large volume of timber which has been transported by water in rafts during the year. Padouk owing to its inaccessibility costs more to extract than other timbers.

More distant forests have been worked and the cost of extraction of the timber has at the same time been reduced by Re. 1 per ton. The loss of two elephants during the year has added over Re. 1 per ton to the cost of extraction of logs.

26. An estimate for a steam timber boat has been prepared by Mr. M. C. Bonig, Assistant Harbour Master, Port Blair, and was submitted to the Superintendent, Port Blair, soon after the close of the year. Mr. Bonig has also assisted me very materially in improving the construction of timber rafts.

27. A passage connecting Shoal Bay Creek with Kotara Harbour was buoyed out by Mr. Bonig at a cost of Rs. 614. Rafts can now be brought through sheltered creeks from Kotara Harbour to Katatang instead of going round Kyd Island in the open sea.

28. A channel 1,500 feet long 18 feet wide and 3½ feet deep was cut through the mangrove swamp separating Kotara Harbour from Port Meadows at the suggestion of Deputy Ranger Mohan Lal. The construction of this channel cost Rs 348 and has taken the place of a tramway it had been intended to construct between these two harbours.

29. The Shaitan Khari Anikhet portable timber tramway has been extended to Manpur during the year at a cost, including the line and rolling stock, of Rs. 42,982. The track for the line has been made as far as Temple Gunj with a branch line to Balughat.

This line goes across the South Andaman island from east to west and connects the West coast forests with Port Blair Harbour. Timber worked out from these forests can now be brought to Port Blair over the tramway instead of being rafted round the south end of the island and up the West coast to Port Blair Harbour, a distance of 50 miles. Rafting from these West coast forests would only be possible during two months of the year.

The line also allows of the forests near Balughat and along the North side of the Jorawa Khari (Anikhet valley) being worked, and if a steam engine is used to draw the trucks, will supply the Settlement with fuel for a great number of years, besides providing a line of export for the rice, etc., grown in the Anikhet valley.

Seven elephants were purchased during the year and 7 new timber boats were constructed to deal with the increased volume of timber extracted.

Local cost of extraction of timber.

30. Form No. 65 shows that the total expenditure on timber and other produce removed from the forests by Government agency during the year was Rs. 2,68,533.

From this sum the following amount should be deducted, in order to arrive at the local cost of extraction of timber during 1902-03 :—

		Rs.
A. I. *a*.	(1) Freight of Padouk from Port Blair to London and Calcutta and London agency charges	50,611
	(2) Cost of conversion of timber at the Chatham Saw-Mill ...	23,824
	(3) Cost of materials purchased for Anikhet Temple Gunj Extension Portable Timber Tramway	40,393
	(4) Purchase of materials for 24 fuel trucks	1,988
	(5) Construction of 7 new timber boats	4,842
A. I. *b*.	Cost of extraction of fuel	15,674
A. I. *c*.	Cost of Gorjan oil collection	2,427
A. VI. *a*.	Purchase of 14 buffaloes and 7 elephants	30,542
A. VI. *c*.	Surveying instruments, furniture, etc.	317
A. VII. *b*.	Construction of fuel barracks and permanent buildings at Wimberley Gunj	639
A. IX. *b*.	Freight on 6 elephants purchased during the year ...	6,461
B.	One-sixth part of Rs. 17,882 for supervision of fuel extraction	2,980
	TOTAL ...	1,80,698

This leaves—

	Rs
Chargeable to local extraction of timber during the year ...	87,835
To this add—	
(1) Interest at 5% on value of elephants (Rs. 52,462) shown in Form 60 B, as in stock on 30th June 1902 for one year ...	2,623
(2) Interest at 5% per annum for 5 months on Rs. 36,588, cost of 6 elephants received on 28th January 1903	762
(3) Depreciation on 12 elephants received in February 1902 valued on 30th June 1902 (see Form No. 60-B) at Rs. 54,628 at 10% per annum	5,462
(4) Depreciation on 6 elephants, value Rs. 36,588, received on 28th January 1903 at 10% per annum for 5 months ...	762
(5) Value of elephants received in February 1902 which died during the year—	
Maharani, original price ... ... Rs. 4,523	
Less 15 months' depreciation charged at 10% per annum 604	3,919
(6) Value of elephant "Eden" purchased in 1903 who was destroyed before reaching Port Blair	6,915
GRAND TOTAL ...	1,08,278

Form No. 57 shows that 422,240 cubic feet or 8,445 tons of timber was extracted by Government agency during the year, so that the cost of extraction per ton of timber in the rough is Rs. 12-8 as compared with Rs. 13-8 for 6,101 tons extracted last year.

(2) *Fuel.*

31. The revenue derived from the sale of fuel was Rs. 36,530 as compared with Rs. 45,782 in 1901-02.

The actual expenditure on the extraction of this fuel, so far as it can be separated from the general expenditure on produce removed by Departmental agency, is as follows:—

	Rs.
1. One-sixth pay of establishment debited to departmental works .	2,980
2. Wages and gratuity paid to convicts employed on cutting fuel .	14,822
3. Construction and repair of barracks for fuel cutters . .	365
4. Cost of tools issued to fuel cutters during the year . .	320
5. Purchase of 12 fuel trucks for tramways . . .	2,277
6. Repairs and maintenance of fuel tramways . . .	227
7. Mustard oil issued to fuel cutters . . .	282
8. Repairs to fuel trucks	121
TOTAL .	21,394

The above does not represent the total cost of the extraction of the fuel as labour was supplied by the Settlement free of charge for the construction and maintenance of temporary tram lines and barracks pending the reconsideration of the conditions under which the Forest Department undertook the supply of fuel to the settlement.

The royalty on this fuel at Re. 1 per cord amounts to Rs. 11,338, leaving Rs. 3,798 to pay for the wear and tear on tools, 6 miles of tram line and rolling stock and a reasonable remuneration for work done.

The fuel was cut principally from unclassed forest. Some Gorjan trees were left for seed bearers and the other trees unsuitable for timber are cut as fuel.

(f) EXPLOITATION OF MINOR FOREST PRODUCE.

(1) *Extraction of fodder.*

(2) *Grazing.*

32. No fodder was removed from reserved or unclassed forests, nor does any grazing take place in them.

(3) *Miscellaneous produce.*

33. The Gorjan oil and mangrove bark required by the Settlement were extracted departmentally as usual.

Collection of minor produce by Departmental agency.

The Gorjan oil was collected in the same localities as last year. Work began on the 15th January, before which date the oil does not flow freely and finished on the 25th April 1903.

The oil collectors lived in the new Tusonabad and Manpur barracks and being nearer their work than last year, experienced less difficulty in collecting the oil.

The quantity of oil collected was 68,952 lbs. (59,143 lbs. for the Northern and 9,809 lbs. for the Southern District) compared with 52,848 lbs. collected last year.

The revenue received was Rs. 4,309 compared with Rs. 3,303 in 1901-02.

The expenditure, not taking into account cost of supervision and wear and tear of tools and barrack construction, amounts to Rs. 2,427, of which Rs. 2,259 was paid for labour compared with Rs. 1,873 last year.

The quantity of mangrove bark for the Phœnix Bay Workshops collected from the Port Mouat and Balughat swamps amounted to 70,381 lbs. as compared with 54,705 lbs. in the previous year; the royalty paid on this quantity of bark was Rs. 220.

The conditions under which the bark was collected were the same as last year.

34. The revenue derived from minor produce removed by purchasers amounted to Rs. 303 as compared with Rs. 355 last year. The falling-off is chiefly due to a smaller quantity of Rattan canes having been exported.

CHAPTER III.

Gross yield and outturn of Forest Produce.

35. The following tables compiled from Forms Nos. 57 and 58 give the outturn of the reserved and unclassed forests according to the agency of exploitation, and compares the yield with that of 1901-02 :—

Summary of removals.

(a) *Timber.*

Agency of exploitation.	Reserved Forests.		Protected Forests.		Unclassed Forests.		Total.	
	1902-1903.	1901-1902.	1902-1903.	1901-1902.	1902-1903.	1901-1902.	1902-1903.	1901-1902.
	2	3	4	5	6	7	8	9
	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.
Government .	298,466	153,092	...	...	123,774	151,968	422,240	305,060
Purchasers .	5,491	2,952	...	...	10,066	14,505	15,557	17,457
Free Grantees .	8,525	5,751	...	...	17,050	23,004	25,575	28,755
District Officers	12,532	22,869	...	...	60,013	49,835	72,545	72,704
Total .	325,014	184,664	...	...	210,903	239,312	535,917	423,976
Difference in favour of (+) or against (−) 1902-1903.	+1,40,350		.....		−28,409		+1,11,941	

36. The total outturn of timber in the rough is 111,941 cubic feet solid more than last year, and 169,620 cubic feet solid more than in 1900-01. The increase is due to increase in number of elephants, introduction of rafting by sea and greater efficiency in the method of extraction employed and control exercised.

37. The volume of sawn timber and poles which make up the total outturn of timber compared with the outturn of last year is shown below :—

Nature of produce.	1902-1903.					1901-1902.				
	Cubic feet solid.					Cubic feet solid.				
	Government.	Purchasers.	Free grantees.	Settlement Officers.	Total.	Government.	Purchasers.	Free grantees.	Settlement Officers.	Total.
	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid	c. ft. solid.
Sawn timber . . .	419,215	13,557	...	...	432,772	302,494	14,957	...	...	317,451
Poles	3,025	2,000	25,575	72,545	103,145	2,566	2,500	28,755	72,704	1 1025
Total .	422,240	15,557	25,575	72,545	535,917	305,060	17,457	28,755	72,704	423,976

The volume of sawn timber removed by Government agency was 116,721 cubic feet more, and that removed by purchasers 1,400 cubic feet less than in 1901-02. The total volume of poles removed by all agencies was 3,380 cubic feet more than last year.

The volume of Gorjan (*Dipterocarpus Sp.*) removed by purchasers was practically the same as last year; the decrease is due to a smaller removal of other species of timbers.

The decrease of poles removed by free grantees is due to the number of houses belonging to them being smaller than last year.

The poles removed by Settlement Officers is practically the same as last year.

The number of padouk and other trees cut this year and last year are as follows :—

Year.	Number of trees felled.		
	Padouk.	Others.	Total.
1902-03	2,778	2,222	5,000
1901-02	2,116	2,284	4,400
Difference in favour of 1902-03	+ 662	— 62	+ 600

Elephants not required to drag timber required by the Settlement are employed on extracting padouk.

(b) Fuel.

Agency of exploitation.	Reserved Forests.		Protected Forests.		Unclassed Forests.		Total.	
	1902-03.	1901-02.	1902-03.	1901-02.	1902-03	1901-02.	1902-03.	1901-02.
1	2	3	4	5	6	7	8	9
	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.
Government . .	50,487	362,162	...	...	941,588	781,113	992,075	1,143,275
Purchasers . .	...	...	...	...	3,412	3,412	3,412	3,412
Free grantees .	44,760	50,320	...	...	179,040	201,280	223 800	251,600
District officers .	8,645	7,868	...	...	195,905	111,146	204,550	119,014
Total .	1,03,892	420,350	...	...	1,319,945	1,096,951	1,423,837	1,517,301
Difference in favour of (+) or against (−) 1902-03.	− 316,458		.....		+ 222,994		− 93,464	

38. The total volume of fuel extracted during the year was 1,423,837 cubic feet or 93,464 cubic feet less than last year.

The quantity of fuel cut from reserved forests decreased by 316,458 cubic feet solid while that extracted from unclassed forests increased by 222,994 cubic feet solid.

Free grantees have removed 27,800 cubic feet less than last year owing to a decrease in their numbers.

The quantity of fuel removed by Government agency decreased by 151,200 cubic feet owing to the importation of coal for use in steam launches, workshops and tea gardens.

The quantity of fuel removed by purchasers was the same as in 1901-02.

The quantity of fuel cut by Settlement officers for the manufacture of charcoal and other purposes was 85,536 cubic feet more than last year.

(c) Bamboos.

Agency of exploitation.	Reserved Forests.		Protected Forests.		Unclassed Forests.		Total.	
	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.
1	2	3	4	5	6	7	8	9
	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.
Government . .	20,190	25,250	...	...	29,168	22,085	49,358	47,335
Purchasers . .	26,000	36,000	...	...	6,000	6,000	32,000	42,000
Free grantees .	113,666	76,680	...	...	227,334	306,720	341,000	383,400
District officers .	73,301	64,660	...	...	163,478	98,350	236,779	163,010
Total .	233,157	202,590	...	...	425,980	433,155	659,137	635,745
Difference in favour of (+) or against (−) 1902-03.	+30,567		.....		−7,175		+ 23,392	

(*d*) *Grazing fodder and other minor produce.*

Agency of exploitation.	Reserved Forests.		Protected Forests.		Unclassed Forests.		Total.	
	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902 03.	1901-02.
1	2	3	4	5	6	7	8	9
	R	R	R	R	R	R	R	R
Government . .	225	160	...	...	4,356	3,352	4,581	3,512
Purchasers . .	103	165	...	...	36	44	139	209
Free grantees .	206	139	...	...	412	556	618	695
District officers .	40	57	...	...	125	65	165	122
Total .	574	521	...	...	4,929	4,017	5,503	4,538
Difference in favour of (+) or against (—) 1902-03.	+53		.....		+ 912		+ 965	

39. The total number of bamboos removed was 23,392 more than last year. The number removed from the reserved forests being 30,567 more and those removed from unclassed forests 7,175 less than in 1901-02.

The number of free grantees being less than in 1901-1902, the number of bamboos shown as removed by them was also less. The increase in the number of bamboos removed is chiefly due to larger removals by the Settlement officers; the numbers removed by free grantees and purchasers being less.

40. The value of minor produce removed during the year was Rs. 965 more than last year; this is principally due to the larger quantity of Gorjan oil collected for use of the Settlement.

(1) Departmental Operations.

(*a*) *Timber.*

41. The volume of timber in the log extracted departmentally as compared with that extracted last year is shown below:—

Year.	Volume of timber in the log.	
	C. ft solid or tons.	
1902-03	422,240	or 8,445
1901-02	305,060	or 6,101
Difference in favour of 1902-03	+ 117,180	+ 2,344

The increased volume of timber is partly due to the increase in the number of elephants in the island. The daily average number of elephants in the division was 35 as compared with 29 in 1901-02. The development of transport by water is also largely responsible for the increase in the volume of timber in the rough extracted. More distant forests have been worked and had it not have been found practicable to raft timber it would not have been possible to carry such a large volume of timber overland without a considerable increase of convict labour and rolling stock for tramways.

The average daily number of convicts employed on timber extraction was 499 as compared with 406 men in 1901-02. This includes self-supporters at work in the forest files. There were 28 more self-supporters this year. More men were given by the Settlement to furnish mahouts and grass cuts for the new elephants and for the construction of the Anikhet Temple Gunj tramway.

The issues of timber in the rough from the Haddo timber depôt compared with those of last year are shown below :—

Details of issue.	1902-1903.				1901-1902.			
	Class I.	Class II.	Class III.	Total.	Class I.	Class II.	Class III.	Ttal.
SALES.								
(1) Local.								
Northern District Officer ...	67	3,574	...	3,641	400	2,008	...	2,408
Port Officer	5,305	...	323	5,628	8,304	4,797	292	13,393
(2) Government Departments in India.								
Director, Royal Indian Marine, Bombay.	...	...	...	...	...	...	...	...
Deputy Director, Royal Indian Marine, Calcutta.	...	4,579	...	4,579	...	...	...	...
3. Issued to Chatham Saw-Mill for conversion.	219,733	34,153	32,776	286,662	151,310	93,376	32,473	277,159
(4) Foreign Sale Depôt.								
Two sample Padouk logs sent to Messrs. Ogilvy Gillanders & Co., London.	...	...	...	...	70	...	...	70
One Padouk log sent to Messrs. Anderson Wright & Co., Calcutta.	...	...	...	...	31	...	...	31
Padouk logs sent to Messrs. Ogilvy Gillanders & Co., London.	3,307	...	...	3,307	...	...	...	...
Sent to Calcutta Depôt ...	...	...	...	...	...	68	...	68
(5) Miscellaneous.								
General Public	...	...	...	...	...	...	...	...
Total	228,412	42,306	33,099	303,817	160,115	100,249	32,765	293,129

The issues from Haddo Depôt were 10,688 cubic feet or 214 tons more than in 1901-02. The local sales fell off by 6,532 cubic feet owing to the smaller demands of the Port Officer who has received in full the quantity of timber for seasoning sanctioned by the Government of India. The Indian Marine were supplied with 4,579 cubic feet of timber and 3,138 cubic feet of padouk in the log were exported more than last year. The quantity of timber sent to the Chatham Saw-Mill for conversion shows an increase of 9,503 cubic feet.

Chatham Saw-Mills.

42. The Chatham Saw-Mills which belong to the Penal Settlement were, as in former years, managed by the Deputy Conservator of Forests throughout the year. The mill was closed for three weeks in August to allow of a heavier shafting being laid down, and the furnaces which were worn out being reconstructed, in addition to the usual quarterly repairs which necessitated closing the mill for 14 days.

A tramway was laid down in the yard in front of the mill and connecting it with the shingle shed and the timber seasoning shed in order to economize labour.

A large extension has been made to the timber yard itself to accommodate the increased outturn of the mill.

No additions were made to the machinery at the mill during the year. The old 46-inch saw bench and the old frame saw were repaired, but are nearly worn out. The rest of the machinery is in good order.

The average number of convicts employed at the mills during the year were 138 compared with 130 in 1901-02. The executive establishment remained the same as last year.

43. The receipts of timber in the rough and the yield of converted timber compared with 1901-02 is shewn below :—

Outturn of Chatham Saw-Mill.

Year.	Receipts of timber in the log.						Outturn of sawn timber.			Percentage of waste.		
	Padouk.		Others.		Total.							
	Number of logs.	Volume, c. ft.	Number of logs.	Volume, c. ft.	Number of logs.	Volume, c. ft.	Padouk, c. ft.	Others, c. ft.	Total, c. ft.	Padouk.	Others.	Total.
1902-03	3,448	199,172	2,253	77,546	5,701	276,718	104,921	35,663	140,584	47	54	50
1901-02	2,771	132,415	3,860	142,384	6,631	274,799	65,252	51,884	117,136	50	63	57
Difference	+677	+66,757	-1,607	-64,838	-930	+1,919	+39,669	-16,221	+23,448	-3	-9	-7

The total outturn of the sawmill was 23,448 cubic feet more than in 1901-02, and of this increase 39,669 cubic feet was padouk for export or local consumption. The outturn of timber other than padouk was 16,221 cubic feet less than last year.

The percentage of waste is 50 compared with 57 last year. The percentage of waste in converting padouk is 7 per cent. less than that of other timbers this year compared with 13 per cent. less last year. This is due to larger quantity of unsound logs and shingle wood pieces having been converted this year, and to the reduction in the waste of timbers other than padouk.

The high percentage of waste at the mill is due to the large number of unsound and overmature logs received, and also to the necessity of supplying the Settlement with scantlings of the sizes they indent for instead of standard sizes.

44. The following table shows in detail how the outturn of the mill has been disposed of :—

Disposal of produce.

Year.	Sent to Calcutta for transmission to London.									Sales at Port Blair.						Sales in India and Burma.				Total Outturn.	
	Padouk.						Chugtam and Koko.	Gurjan.	Marble wood.	To Settlement.			To General Public.			Calcutta.		Rangoon.			
	To meet first contract for 1,600 tons dated London, 5th January 1899.			To meet second contract for 1,600 tons dated 21st May 1902.			Experimental.		Experimental.							Gillanders Arbuthnot & Co.	Managing Agent, Calcutta Tramways Co.	Superintendent, Aliporo Jail.	Agency Division, Pegu Circle.		
	Sqrs.	Slabs.	Total	Sqrs.	Slabs.	Total.	Squares.	Scantlings.	Squares.	Padouk.	Others	Total.	Padouk.	Others	Total.					c. ft.	Tons.
	c. ft.	c. ft.	c. ft	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft	c. ft.	c. ft.	c. ft.	
1902-03	...	...	...	35,988	13,882	49,870	1,662	2,074	6	44,188	22,854	67,042	5,888	2,388	8,276	676	2,206	750	847	133,499	2,668
1901-02	26,926	1,578	28,504	...	...	...	...	...	...	30527	45,093	75,620	1,086	1,791	2,877	502	...	500	...	103,003	2,160

The export of padouk increased by 427 tons and nearly 1,000 tons of the 1,600 tons due onnthe contract dated 21st May 1902 was supplied. Besides this 33 tons of Koko and black chuglam was also exported and 41 tons of gorjan scantlings were sent to London for wood paving blocks.

The local sales fell off by 63 tons and the sales in India and Burma increased by 70 tons.

Fifty thousand padouk and pyimma shingles were sent to Burma for experimental sale.

The wood exported to Calcutta consisted of padouk, pyimma and didu shingles.

London Depôt.

45. The details of the timber sent to Messrs. Gillanders Arbuthnot & Co., Calcutta, for transmission to Messrs. Ogilvy Gillanders & Co., London, for sale is shown below :—

Timber exported through Messrs. Gillanders Arbuthnot & Co., Calcutta.

Kind of timber.	Opening balance on 1st July 1902.		Sent during the year.		Sales during the year.		Closing balance on 30th June 1903.	
	Number.	c. ft.	Number.	c. ft.	Number.	c. ft.	Number.	c. ft.
Padouk squares . . .	351	13,272	1,126	35,988	867	30,647	610	18,613
Padouk slabs	93	1,401	2,130	13,882	927	6,619	1,296	8,664
Rough hewn padouk squares .	...	...	50	3,307	35	2,482	15	825
Chuglam and Koko squares and slabs.	...	...	62	1,662	6	179	56	1,483
Marble wood	...	...	1	6	...	...	1	6
Gorjan scantlings . . .	...	...	...	2,074	...	...	...	2,074
TOTAL . .	444	14,673	3,369	56,919	1,835	39,927	1,978	31,635

The balance of timber not paid for in the London depôt at the close of the year was 16,992 cubic feet more than at the end of 1901-1902.

(*b*) *Firewood.*

Firewood.

46. Fuel was, as in former years, supplied to the Settlement. The details of the outturn have been given in Chapter II, para. 21. The total volume of fuel extracted was 2,483 cords less than last year on account of the introduction of coal as already explained.

2. *Removal of produce by purchasers.*

(*a*) *Timber.*

47. The volume of timber removed by purchasers still forms a very insignificant part of total yield of the forests.

13,557 cubic feet of sawn timber were removed this year as compared with 14,957 cubic feet in 1901-1902. The details of this timber are given in Chapter II, para. 22.

The falling-off in the removals of timber by private purchasers compared with former years is due to all easily accessible trees having been already exploited. Gorjan (*Dipterocarpus sp.*) is cut for export, other woods principally

or local use. The sales of rejected timber from the Chatham Saw-Mills commenced during the year have probably affected quantity of timber extracted by purchasers for local sales.

(*b*) *Fuel.*

48. The quantity of fuel removed by purchasers was the same as last year, *i.e.*, 3,412 cubic feet solid.

(*c*) *Bamboos.*

49. The number of bamboos removed during the year was 32,000 as against 42,000 removed in 1901-1902.

The decrease is due to smaller demand.

(*d*) *Minor produce.*

50. The value of minor produce removed in 1902-1903 was Rs. 287 as compared with Rs. 334 in 1901-1902.

The following produce was removed during the year:—

Ordinary cane	No. 3,000
Thatching leaves	bundles 9,760

3. *Free grants of forest produce.*

51. Free grants of forest produce were as usual made to Settlement officers for construction of and repairs to temporary barracks and sheds and to free residents and convict self-supporters for repairing their huts. The volume of timber, consisting entirely of poles, bullees and small posts thus removed, was 98,120 cubic feet.

The nature and value of the free grants of forest produce is shown below—

Nature of produce removed.	VOLUME.				VALUE.		Remarks.
	District Officers.		Free residents or convict self-supporters.		District officers.	Free residents or convict self-supporters.	
	Number.	Cubic feet solid.	Number.	Cubic feet solid.	Rs.	Rs.	
			(1) Reserved Forests				
Poles and bullees.	...	12,532	...	8,525	3,759	2,557	
Fuel	...	8,645	...	44,760	328	1,693	
Bamboos	73,301	...	113,666	...	36	57	
Minor produce	...	...	...	...	4	149	
			(2) Unclassed Forests.				
Poles and bullees.	...	60,013	...	17,050	18,003	5,115	
Fuel	...	195,905	...	179,040	7,417	6,777	
Bamboos	163,478	...	227,334	...	82	113	
Minor produce	...	...	...	...	43	299	
Total	236,779	277,095	341,000	249,375	29,672	16,760	

CHAPTER IV.

FINANCIAL RESULTS.

52. The revenue and expenditure of the year compares with that of the previous year as follows :—

Financial Results.

Year.	Financial Year.			Forest Year.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1902-03	3,26,035	2,81,702	44,333	3,38,419	2,77,510	60,909
1901-02	2,66,903	1,96,038	70,865	2,57,136	2,11,950	45,186
Difference	+59,132	+85,664	−26,532	+81,283	+65,560	+15,723

The surplus is 24 per cent. and the expenditure 82 per cent. of the gross revenue as compared with 18 per cent. and 82 per cent. last year. In both years the expenditure has been abnormally high owing to purchase of elephants and tramway materials. The tramway material (price Rs. 66,870) purchased in the year 1900 was not debited against the revenue of the division. The increase in the revenue is due to larger sales of padouk during the year. The revenue due on 562 tons of padouk despatched to London from Port Blair during the year was not paid until after the close of the forest year.

The principal differences under the several budget sub-heads are as follows :—

R. I. a. Timber removed by Government.

The increase of Rs. 93,143 is due to—

	Rs.
(1) Increase in sales of London padouk	87,933
(2) Increase in revenue received from the Settlement . .	5,210
	93,143

R. I. b. Fuel removed by Government.

The decrease of Rs. 12,707 is due to the Settlement having stopped taking mangrove fuel.

A. I. a. The expenditure on removal of timber by Government agency is Rs. 79,920 more than last year. Of this sum Rs. 42,381 was spent on the purchase of tramway material and rolling stock. The actual cost of extraction of the timber, its conversion and freight to London, was greater in proportion to the increased volume extracted.

A. I. b. The decrease of Rs. 3,069 is principally due to smaller volume of fuel extracted.

A. VI. a. The expenditure on purchase of elephants was less by Rs. 17,758 than last year. Seven elephants were bought against 13 last year.

A. VI. b. There were on an average six elephants and 17 buffaloes more to feed this year, and the expenditure consequently rose by Rs. 9,900.

A. VIII. e. The increase is due to more planting work being done during the year.

A. IX. b. Decrease of Rs. 9,760 is due to less freight being paid for elephants during the year.

53. The revenue and expenditure of the five previous financial and forest years is compared below :—

Year.	Financial Year.			Forest Year.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1901-02	2,66,993	1,96,038	70,865	2,57,126	2,11,950	45,186
1900-01	2,77,886	1,40,136	1,37,750	2,70,363	1,39,579	1,30,784
1899-1900	2,60,597	1,40,942	1,19,655	2,91,115	1,41,806	1,49,309
1898-99	2,29,467	1,38,397	91,070	2,27,480	1,39,582	87,898
1897-98	4,33,707	2,47,336	1,86,371	3,03,018	1,82,980	1,20,038
Average of 5 years ending 1901-02 .	2,93,712	1,72,570	1,21,142	2,69,822	1,63,179	1,06,643

54. The receipts and charges under the 3 heads of work are extracted from Form No. 65 and compared with similar figures of the last two years.

	1902-03.		1901-02		1900-01.	
	Surplus.	Deficit.	Surplus.	Deficit.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Departmental operations . .	68,153	...	50,144	...	1,28,599	...
Other revenue	988	...	791	...	2,607	...
Protection	...	8,232	...	5,749	...	422
Total	60,909	...	45,186	...	1,30,784	...

The proportion of gross revenue spent on protection and improvement is 2·43 per cent. as compared with 0·02 per cent. in 1901-02.

Value of live and dead stock (Forms 60 A and 60 B).

55. The difference in the value of timber and other produce and of live and dead stock at the close of the year was as follows :—

	Timber, etc. Rs.	Live and dead stock. Rs.
Value on 1st July 1902	1,07,408	1,66,753
Value on 30th June 1903	2,53,511	2,32,549
Difference	+ 1,46,103	+ 65,796

The balance in favour of the year is therefore Rs. 2,11,899. This is due to increase in stock of timber in the rough and converted and to purchase of tramway and elephants during the year.

Outstanding on account of revenue.

56. The outstandings on account of revenue at the close of the year were Rs. 23,439 as compared with Rs. 11,505 in 1901-02, owing to the increase in the volume of timber delivered to the Settlement in consequence of the greater outturn of the Chatham Saw Mill.

Net results of the year's working.

57. The net results of the year's work, showing a balance in favour of the year of Rs. 2,84,742 compared with Rs. 1,59,837 in the previous year, are shown below :—

	Rs.
Cash surplus	60,909
Add—	
Increased value of stock, Forms 60 A and 60 B . . .	2,11,899
Increase in outstandings of revenue	11,934
Total in favour of the year .	2,84,742

CHAPTER V.

FOREST ADMINISTRATION.

58. Mr. Eardley-Wilmot, as Conservator of Forests, Pegu Circle, inspected the division from the 17th to the 26th December and submitted his report on the working of the forests to the Chief Commissioner of the Andamans and Nicobars on the 27th December 1902. The orders of the Government of India on Mr. Eardley-Wilmot's report were not received during the year under review.

59. Mr. C. G. Rogers, Deputy Conservator of Forests, was in charge of the Andamans Forests throughout the year.

Mr. G. T. Wrafter, Extra Assistant Conservator of Forests, 3rd grade, was attached to the division throughout the year and has continued to work hard and well.

Deputy Rangers Hussain Ali and Mohan Lal have given satisfaction in the discharge of their duties as range officers and have materially contributed to the increase in the outturn of timber.

Deputy Ranger Hussain Ali was arrested on the 11th May 1903 on a charge of abetment of murder and was under suspension at the close of the year. He was acquitted of all blame by the Sessions Judge on the 24th July 1903 and reinstated, the time he was under suspension counting towards privilege leave and pension.

The Head Clerk Khuda Buksh has efficiently carried out his duties during the year and has received efficient help from the clerks under him in his efforts to cope with the increased work.

60. The daily average strength of the forest files compared with last year is shown in the subjoined table. The strength of the firewood and gorjan oil files varies with the quantity of firewood and oil indented for by the Settlement:—

Labour.

Name of file.	1902-1903.							1901-1902.							Remarks.
	Sanctioned strength of file supplied by Settlement including 10 per cent. sick.	Actual strength.					Self-supporters.	Sanctioned strength of file supplied by Settlement including 10 per cent. sick.	Actual strength.					Self-supporters.	
		Petty officers.	Labouring convicts.	Sick.	Total.	Efficient strength of files supplied by Settlement.			Petty officers.	Labouring convicts.	Sick.	Total.	Efficient strength of files supplied by Settlement.		
Timber extraction ...	458* 562†	47	354	91	492	401	103	370‖ 458*	38	283	67	388	321	85	
Plantation and cultural operations.	...	2	23	3	28	25	3	...	1	3	1	5	4	1	
Wimberley Gunj steam tramway construction	142‡ 150§	6	60	20	86	66	...	57¶ 142‡	5	54	17	76	59	...	
Anikhet-Temple Gunj tramway construction	...	4	27	6	37	31	6	...	...	...	...	...	...	...	
Chatham Saw-Mill ...	163	9	129	9	147	138	5	163	10	120	6	136	130	3	
Firewood extraction ...	...	18	186	...	204	204	...	...	23	213	...	236	236	...	
Gorjan oil collection ...	...	3	28	...	31	31	...	...	2	23	...	25	25	...	
Total ...	...	89	807	129	1,025	896	117	...	79	696	91	866	775	89	

* Sanctioned on 10th May 1902. | † Sanctioned 25th May 1903. | ‡ Sanctioned 10th May 1902. | § Sanctioned 25th May 1903.
‖ Up to May 1901. | ¶ Up to Febru ary 1902.

The total daily increase in the *efficient* strength of the files engaged upon timber extraction, plantations and cultural operations and tramway extraction (excluding self-supporters) was 139 men. The daily average distribution of the labour on these works (including self-supporters) compared with 1901-1902 is shown below :

Work.	Details.	Strength of files. 1902-1903.	Strength of files. 1901-1902.
Supervising convicts, munshees, barrack watchmen, etc.	Jemadar	2	2
	10 per cent. petty officers	46	34
	1 per cent. tindal	2	2
	2 per cent. umedwars	9	6
	Munshees, watermen and ration mates ...	31	25
		90	69
Transport by water ...	On steam launch "Eileen"	5	5
	Building and repairing timber boats, etc. ...	13	9
	Crew of timber boats and employed in timber depôts.	78	63
	Rafting timber	12	8
		108	85
Elephant establishment ...	In charge of elephants and buffaloes ...	120	90
	Making elephant gear and repairing dragging paths.	30	24
		150	114
Barrack construction ...	Building barracks, guard houses, etc. ...	15	14
	Repairing barracks, guard houses, etc. ...	8	7
		23	21
Tramways, etc.	Maintenance of miles of tramway ...	14	14
	Construction of temporary lines	8	12
	Construction of Wimberley Gunj steam tram line.	60	54
	Construction of Anikhet Temple Gunj temporary tramway.	33	...
	Construction of channel from Kotora to Port Meadows.	5	...
		120	80
Works of improvement ...	Valuation surveys	3	3
	Plantations	26	4
		29	7
Exploitation	Felling	31	25
	Squaring...	44	38
	Trucking	40	31
		115	94
	Total	635	470

61. The number of elephants at the commencement of the year was 39 including three calves—"Maxie," age 17, "Diamond Jubilee," age 6, and "Nineteen hundred," age 3.

Elephants.

Seven new elephants (tuskers) were bought through the Superintendent of Government Kheddas, India, at a cost, delivered at Port Blair, of Rs. 43,503. The finest elephant of the batch, "Eden," went *musth* on the march to Calcutta, and had to be destroyed as he became dangerous to life and property. The other six elephants were very fine animals and were all landed in good

condition on the 28th January 1903. One of these, "Ram Pershad," was badly injured in June 1903 owing to the ignorance of his convict mahout—a log fell on his hind legs and has seriously affected the left hind leg; he may never be fit for work again.

Four elephants died during the year; of these "Bashful," "Gulalie," and "Jatra" died from natural causes; they were old and weak animals and were received before 1891, so have done more than 11 years, work, and were worn out by fair wear and tear. The other elephant, "Maharani," was received in February 1902 and died of the same mysterious disease to which "Rustom Peary" succumbed last year.

"Eden," one of the seven new tuskers purchased during the year, had to be destroyed before he reached Port Blair, as he went *musth* and became dangerous to life and property.

The total strength of elephants at the close of the year is therefore 41 (including three calves) as compared with 39 last year.

No qualified elephant doctor has been received during the year.

The daily average number of elephants at work in the forests or at timber depôts, taking a month as containing 26 working days, was 26. Nine elephants including "Sundri" were daily on the sick list and two of the three calves are still too young to work.

A descriptive roll of the elephants is given in Appendix I.

Buffaloes.

62. Twenty buffaloes were on stock at the close of the year; 14 new buffaloes have been purchased for the Anikhet Temple Gunj tramway.

Steam Launch.

63. The steam launch "Eileen" was at work 257 days and was laid up for 58 days for cleaning, painting and some repairs to her hull. Two plates which were found to be corroded badly were taken out and replaced.

Boats.

64. During the year seven new timber boats were constructed to deal with the increase in the outturn of the forests. The existing boats and lighters were kept in good repair at the close of the year; there were two lighters, 20 timber boats, four jolly boats and two dinghies on stock.

Rafting gear.

65. A good deal of rafting gear has been made during the year. Wooden cross pieces to which the logs are fastened by ropes and latterly chains have been made locally, and strong chains have been purchased for connecting the sections of which the raft is made up have been bought.

Markets for Andamans timbers.

66. During the year 15 specimen boxes of Andaman woods have been made up and given to firms in Calcutta and elsewhere who have enquired after the Andamans timbers and the exports to Calcutta have increased by 3,477 cubic feet.

A sample consignment of 2,074 cubic feet of gorjan (*Dipterocarpus sp.*) was sent to London to be tried for wood pavement, and a favourable report on this parcel has been received. The prospect of opening up markets for Andaman timbers other than padouk seems promising. The exports of timbers other than padouk increased by 10,818 cubic feet during the year.

PORT BLAIR;

The 30th September 1903.

GILBERT ROGERS,
Deputy Conservator of Forests,
In charge Andamans Division.

Appendix I.

Descriptive roll of elephants in the Andamans Forests Division on the 30th June 1903.

Serial No.	Name of elephant.	Sex	Height. Feet.	Height. Inches.	Date of receipt.	Estimated age on 31st March 1892, or on date of receipt if received later.	Present age.	Number of years elephant has been working.	Condition.	Number of days. At work.	Number of days. At rest.	Number of days. Sick.	Remarks.
1	2	3			5	6	7	8	9	10			11
						Y.	Y.	Y. M.					
1	Hannah ...	Female	7	3	Before July 1891	33	44	More than 12 0	Good, strong ...	251	54	60	Cost price not known.
2	Arnold ...	Male	8	8	Do. 1891	41	52	,, 12 0	Worn out, weak ...	80	15	270	Ditto
3	Bhairon Pershad...	Do.	7	9	December 1895	32	40	7½ 0	Thin fair, works well...	259	59	47	Cost Rs. 3,488
4	Australia ...	Female	9	1	Before March 1886	28	39	More than 17 0	Good, strong ...	285	65	15	Cost price not known.
5	Viper	Do.	7	9	Do. ,,	36	47	,, 17 0	Do. ...	288	71	6	Ditto
6	Luchmi ...	Do.	7	¾	April 1891 ...	32	44	12 0	Good, fairly strong ...	288	68	9	Cost Rs. 3,025
7	Sah pah ...	Male	7	10	March 1894 ...	33	42	9 0	Good, strong ...	292	67	6	,, 3,538
8	Bhokang ...	Do.	7	11	Do. ...	36	45	9 0	Strong, has had a bad sore-back.	105	34	226	,, 4,088
9	Shwe Dawng ...	Do.	7	¾	Do. ...	34	43	9 0	Fair, strong ...	274	79	12	,, 3,238
10	Paul	Do.	7	3	Do. 1895 ...	30	38	8 0	Strong, timid ...	292	73	...	,, 3,763
11	Adolphas ...	Do	7	3	Before March 1886	23	34	More than 17 0	Thin, works well ...	201	57	107	Cost price not known.
12	Pagi	Female	7	6	March 1894 ...	32	41	9 0	Fair, strong ...	255	73	37	Cost Rs. 2,713
13	Wellington (Tusker).	Male	8	4½	,, 1895 ...	35	43	8 0	Good, very strong ...	209	49	107	,, 3,855
14	Maxie	Female	6	1	Born in January 1886.	6	17	1 0	Good, on light work ...	284	81	...	Commenced work 1st July 1902.
	Oswold ...	Male	5	5½	Before March 1886	40	51	More than 17 0	Thin, works well ...	264	81	20	Cost price not known.
16	Aurangabad ...	Female	7	3	May 1892 ...	17	28	11 0	Strong, works well ...	285	76	4	Cost Rs. 2,530
17	Jangipuri ...	Do.	8	2	April 1891 ...	27	39	12 0	Good, strong ...	228	61	76	,, 3,025
18	Kate	Do.	7	¾	Before March 1886	22	33	More than 17 0	Strong, good ...	248	64	53	Cost price not known.
19	Sundri ...	Do.	7	1	,, July 1891 ...	56	67	,, 12 0	Worn out, nearly blind	21	3	341	Ditto
20	Mahpah ...	Do.	7	6	March 1894 ...	31	40	9 0	Fair, a strong animal	204	68	93	Cost Rs. 2,813
21	Behram ...	Male	7	10	December 1895 ...	28	36	7½ 0	Fair fairly strong ...	269	75	21	,, 3,355
22	Gulabee ...	Female	7	8	March 1895 ...	40	48	8 0	Good, not strong ...	233	76	56	,, 2,605
23	Diamond Jubilee	Male	...	...	Born in August 1897.	5	6	.....	Good, a calf ...	...	...	...	.....
24	Nineteen hundred	Do.	...	...	Born in January 1900.	3	4	.....	Good, a calf ...	...	...	...	.....
25	Mabel	Female	8	1	11th February 1902	28	29	1 4	Good, strong ...	252	67	46	Cost Rs. 4,523
26	Anarkally ...	Do.	8	5	Do. ...	40	41	1 4	Quite useless ...	37	8	320	,, 4,523
27	Suraj Mukhi ...	Do.	8	2	Do. ...	33	34	1 4	Fair, fairly strong ...	263	62	40	,, 4,523
28	Lily	Do.	8	2	Do. ...	30	31	1 4	Good, strong ...	256	52	57	,, 4,523
29	Raja Show ...	Do.	8	3	Do. ...	35	36	1 4	Poor, has been ill the whole year.	36	8	321	,, 4,523
30	Gulbadan ...	Do.	7	9	Do. ...	26	27	1 4	Fair, in regular work ...	260	75	30	,, 4,523
31	Rani	Do.	8	1	Do. ...	30	31	1 4	Fair, not very strong ...	201	51	113	,, 4,523
32	Moti Mala ...	Do.	7	6	Do. ...	25	26	1 4	Good, strong ...	303	62	...	,, 4,523
33	Delhi	Do.	7	8	Do. ...	26	27	1 4	Do. ...	251	77	37	,, 4,523
34	Khanam ...	Do.	7	9	Do. ..	32	33	1 4	Fair	144	27	194	,, 4,523
35	Meerut ...	Do.	7	10	Do. ...	27	28	1 4	Good, in regular work	276	69	20	,, 4,523
36	Bhola Nath (Tusker).	Male	8	2	28th January 1903	30	30	0 5	Good, not used to work yet.	94	34	22	,, 5,914
37	Ram Pershad (Tusker).	Do.	8	2	Do. ...	23	23	0 5	Bad, seriously hurt ...	99	27	24	,, 6,214
38	Amir (Tusker) ...	Do.	8	0	Do. ...	23	23	0 5	Good, strong ...	98	52	...	,, 5,915
39	Gopal Das (Tusker)	Do.	8	7	Do ...	25	25	0 5	Do. ...	97	53	...	,, 6,215
40	Lutchmi Pershad (Tusker).	Do.	8	1	Do. ...	30	30	0 5	Do. ...	107	31	12	,, 6,415
41	Sundah Pershad (Tusker).	Do.	8	8	Do. ...	25	25	0 5	Do. ...	103	47	...	,, 5,915

The following elephants died during the year—

1. Bashful, died on 21st July 1902. Received before July 1891.
2. Maharani, died on 28th August 1902. Received before February 1902.
3. Jatra, died on 31st December 1902. Received before July 1891.
4. Eulalee, died on 8th March 1903. Received before July 1891.

(Signed) C. G. ROGERS,
Deputy Conservator of Forests, Andamans.

PORT BLAIR;
The 16th September 1903.

Annual Form No. 46—(*Prescribed*).

Forest Department, India, Andamans Division.

Area of Reserved Forests, Protected Forests and Unclassed State Forests and Waste lands for the Forest year 1902-03.

Division.	Range.	Civil District or territory.	Name of Forest.	Area on 1st July 1902.		Added during the year.	Excluded or transferred to other heads.	Area on 30th June 1903.		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
						Reserved Forests.					
...	...	...	1. Navy Bay Padouk Plantation Reserve.	10	·04	...	...	10	·04	...	These forests have been simply declared "Reserved Forests" in the local official Gazette in accordance with the policy enunciated by the Inspector-General of Forests in his "suggestions" of 1891. The Indian Forest Act is not in force in the Andamans.
...	...	...	2. Navy Bay Teak Plantation Reserve.	16				16			
...	...	...	3. Alimusjid Reserve ..	14,916	23·	...	...	14,916	23·	...	
...	...	...	4. Mount Harriett Reserve...	28,800	45·	...	...	28,800	45·	...	
...	...	...	5. Brigade Creek Reserve ...	2,344	3·66	...	...	2,344	3·66	...	
...	...	...	6. Dhani Khari Reserve ...	8,045	12·57	...	...	8,045	12·57	...	
...	...	...	7. Hope Town Reserve ...	415	0·65	...	...	415	0·65	...	
...	...	...	8. Shoal Bay Reserve ...	9,728	15·20	...	...	9,728	15·20	...	
...	...	...	9. Port Meadows Reserve ...	12,160	19·00	...	...	12,160	19·00	...	
...	...	...	10. Middle Strait Reserve ...	23,411	36·58	...	...	23,411	36·58	...	
Andamans	...	Andamans ...		99,845	156·00	...	...	99,845	156·00	...	
				Protected Forests.							
Do. ...	...	Do. ...		*Nil.*							
				Unclassed State Forests and Waste Lands.							
Do. ...	...	Do. ...		11,48,921	1,795	...	4*	11,48,917	1,795	...	* These areas were cleared for cultivation by the Settlement.
			TOTAL ...	...	...	...	...	...	1,951	...	

Form No. 47.

Statement showing the progress made in, and the expenditure incurred on, Forest Settlements during 1902-03.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year.	Areas finally settled during the year.					Areas undergoing settlement.						Remarks.
			Number and date of Government order according final sanction to the Settlement.	Name of Forest settled.	Area in square miles.	Expenditure incurred during the year on areas finally settled.		Entire cost per square mile of area finally settled during the year.	At commencement of the year.		Taken in hand during the year.		Expenditure incurred during the year on areas undergoing settlement.		
						In Forest accounts.	In other accounts.		Name of tract.	Area in square miles.	Name of tract.	Area in square miles.	In Forest accounts.	In other accounts.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		sq. ms.				Rs.	Rs.	Rs.					Rs.	Rs.	
Andamans .	Andamans .	156	...	...	...	...	...	...	...	...	...	..	...	...	

Form No. 48.

Record of Demarcation and Maintenance of Boundaries, 1902-03.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries not demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans	...	...	42	42	29	116	187	...	...	

N. B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of subdivisions, such as blocks, compartments, coupes.

Form No. 49.

Statement of Forest areas surveyed and under survey during the year 1902-1903.

Division.	Areas surveyed and under survey during the year.																						Areas remaining to be taken under survey.	Total Forest area at end of the year, as per Form No. 46.	Cost.			Remarks.
	Special surveys—Maps on 4" scale or over, by Survey of India Department or Forest Survey Branch.								*Ordinary, included in District Surveys.*								*Chain and compass or other surveys by local officers.*											
	With interior details.					Boundary surveys.			With interior details.					Boundary surveys.			With interior details.					Boundary surveys.						
	With details of growing stock.		Without details of growing stock.		Total Cost.	Previous.	Of the year.	Total Cost.	With details of growing stock.		Without details of growing stock.		Total Cost.	Previous.	Of the year.	Total Cost.	4 inches or over.		Under 4 inches.		Total Cost.	Previous.	Of the year.	Total Cost.			Previous.	Of the year.	Entire cost of all survey to end of the year.	
	Previous.	Of the year.	Previous.	Of the year.					Previous.	Of the year.	Previous.	Of the year.					Previous.	Of the year.	Previous.	Of the year.										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	sq. ms.	sq. ms.	sq. ms.	sq. ms.	Rs.	sq. ms.	sq. ms.	Rs.	sq. ms.	sq. ms.	sq. ms.	sq. ms.	Rs.	sq. ms.	sq. ms.	Rs.	sq. ms.	sq. ms.	sq. ms.	sq. ms.	Rs.	sq. ms.	sq. ms.	Rs.	sq. ms.	sq. ms.	Rs.	Rs.	Rs.	
Andamans	...	...	...	...	...	...	...	...	243	5	1,703	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,951	(a)	225	...	(a) Not accurately known. The cost of the Andamans survey is not known. Linear valuation surveys were made over an area of 5 square miles in the Port Meadows and Middle Strait Reserves.

Form No. 50.

Progress made in Working-Plans, 1902-03.

Division.	Areas for which Working-Plans have been completed.		Areas for which Working-Plans are being compiled.		Areas for which Working-Plans have still to be taken in hand.	Total Forest area, as in Form No. 46.	Entire cost, per square mile, of Working-Plans completed.	Remarks.
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.				
1	2	3	4	5	6	7	8	9
	sq. ms.	sq. ms.	sq. ms.	sq. ms.	sq. ms.	sq. ms	Rs.	
Andamans	...	...	...	...	1,951	1,951	...	Reserved Forests, 156 square miles. Unclassed State Forests, 1,795 square miles.

Form No. 51.

Communications and Buildings during 1902-03.

Division.	New work undertaken during the year.						Repairs executed during the year.						Remarks.
	Buildings.		Roads and Paths.			Total Expenditure on new work.	Buildings.		Roads and Paths.			Total Expenditure on repairs.	
	Description of Building.	Expenditure incurred.	Road or Path and object of the same.	Length of Road or Path.	Expenditure incurred.		Nature of Repairs.	Expenditure incurred.	Nature of Repairs.	Length repaired.	Expenditure incurred.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Rs.		Miles.	Rs.	Rs.		Rs.		Miles.	Rs.	Rs.	
Andamans	New temporary convict barracks.	742	Anikhet Temple Gunj Extension Tramway.	4½	1,747*		Repairs to temporary convict barracks.	895	Maintenance of Shaitan Khari Anikhet timber tram line.	2	133		* Besides this sum Rs. 41,236 debited to *A. I. a* was spent on this work.
	Rest houses for controlling and executive staff.	82	Wimberley Gunj Steam Tramway.	...	8,040†		Repairs to Police guard barracks.	19	Maintenance of Shaitan Khari fuel line.	2¼	26		† Commenced in 1900-01.
	Police guard barracks.	122					Miscellaneous ...	8	Maintenance of Wimberley Gunj handwork timber tram line.	4	76		Total length of track ready for laying rails shown—
	Deputy Ranger's quarters, Wimberley Gunj (finished).	54§							Purchase of material for construction and repair of fuel trucks and tramways.	...	372‡		1900-01—1 mile 1901-02—1 ,, Total... 2 miles
	Engine driver's house (completed).	65§											‡ Besides this sum Rs. 5,419 debited to *A. I. a.* and *A. I. b.* was spent on the purchase of materials for repairs to tram line and purchase and repairs of fuel trucks.
	Assistant engine driver's house (completed).	39§											
	Engine shed (completed).	37§							Construction of a well at Lokotot Joniga.	...	3		
	Truck shed (completed).	32§							Repairs to dragging paths.	...	13		
	Munshee's house (begun).	28§											§ This does not include cost of timber and shingles used in their construction.
	Materials for construction of permanent buildings (not used).	123											
	Total ...	1,324	Total ...		9,787	11,111	Total ...	922	Total ...		623	1,545	

Form No. 52.

Register of breaches of Forest Rules during 1902-03.

Forest Division.	Cases pending from 1901-02.	New Cases of the Year.					Total cases.	Disposed of during the year.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new Cases of the year.		Convictions.		Acquittals.		Total.		
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
Andamans ...	...	...	4	...	...	4	4	2	2	2	2	4	4	...
Grand Total A ...	....	...	4	...	...	4	4	2	2	2	2	4	4	...
Grand Total B ...	...	...	...	...	..	...	...	...	...	...	...	...	...	...
Grand Total C ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N. B.—A means cases taken into Court.
B means cases disposed of under section 67 of Indian Forest Act, 1878.
C means undetected cases.

Form No. 54.

Area closed and open to grazing during 1902-03.

Division.	Area, in square miles.					
	Closed to all animals.		Closed to browsers (camels, goats or sheep).		Open to all animals.	Total area.
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.	
1	2	3	4	5	6	7
			Reserved Forests.			
Andamans	...	...	...	...	156	156
			Protected Forests.			
			Nil.			
			Unclassed State Forests.			
	...	...	...	...	1,795	1,795

Form No. 56.—[*Prescribed.*]

Area of Plantations, 1902-03.

Division.	Name of Plantation.	Area in acres.				Receipts	Charges	Remarks.
		On 1st July 1902.	Added during the year.	Excluded during the year.	Area on 30th June 1903.	of the year.		
		Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	
	Regular Plantations.							
Andamans ...	Navy Bay	10	...	...	10	...	...	
	Goplakabang	71	13	7	77*	...	239	*Actual area found when plantations were surveyed and map made including sowing of 1902-03, 13 acres.
	Brigade Creek Mangrove	313	...	143	170†	...	271	†Plantation was surveyed this year, previous area shown is incorrect.
	Dhani Khari Mangrove	67	141	...	208	...	775	
	Total	461	154	150	465	...	1,285	
	Cultural operations.							
	Goplakabang, 1889-90	45	47	...	92‡	...	...	‡Area was surveyed during the year. Previous area shewn is incorrect.
	Dhani Khari lines	1,458	...	1,458	...	...	730	
	Goplakabang Valley	5	...	...	5	...	...	
	Namunaghar Padouk	2	...	...	2	...	30	
	Namunaghar Mahogany	1	...	...	1	...	1	
	Total	1,511	47	1,458	100	...	761	
	Grand Total	1,972	201	1,608	565	...	2,046	

Form No. 57.

Outturn in cubic feet (solid) of Timber and Fuel during the Forest year 1902-03 and Agency of exploitation.

Division.	Timber in the rough, Logs.					Timber in the rough, Poles.					Sawn or square Timber.					Miscellaneous.					Fuel.					Total Outturn.	Remarks.
	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	12	13	19	20	21	22	23	24	25	26	27	28
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
I.—Reserved Forests.																											
Andamans ...	146,582	...	...	...	146,582	3,025	1,500	‡ 8,525	12,532	25,582	* 148,859	† 3,991	...	...	152,850	...	...	...	...	...	50,487	...	§ 44,760	8,645	103,892	428,906	
Total ...	146,582	...	...	...	146,582	3,025	1,500	8,525	12,532	25,582	148,859	3,991	...	...	152,850	...	...	...	...	...	50,487	...	44,760	8,645	103,892	428,906	
II.—Protected Forests.																											
								Nil																			
Total ...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	
III.— Unclassed Forests.																											
Andamans ...	59,360	...	...	...	59,360	...	500	‡ 17,050	60,013	77,563	* 64,414	† 9,566	...	...	73,980	...	...	...	...	...	941,588	3,412	§ 179,040	195,905	1,319,945	1,530,848	
Total ...	59,360	...	...	...	59,360	...	500	17,050	60,013	77,563	64,414	9,566	...	...	73,980	...	...	...	...	...	941,588	3,412	179,040	195,905	1,319,945	1,530,848	
GRAND TOTAL ...	205,942	...	...	...	205,942	3,025	2,000	25,575	72,545	103,145	213,273	13,557	...	...	226,830	...	...	...	...	...	992,075	3,412	223,800	204,550	1,423,837	1,959,754	

* Rough hewn logs.
ACTUALS.
† Sawn timber.
ACTUALS.
‡ An *estimate* based on number of free grantees' huts. Add 10 bullocs =5 cubic feet and 2 posts= 10 cubic feet—are allowed for each house.

§ There are 1,705 householders and quantity of fuel removed per house is *estimated* at 1½ cords per annum 1 cord =87½ cubic feet solid.

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it being entered in cubic feet solid.

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 58.—[*Prescribed.*]

Outturn of Minor Forest Produce during the Forest year 1902-03.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
		By Government Agency		By Purchasers.		By Free Grants.		By District Officers.		Total.		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
			Rs.		Rs.		Rs.		Rs.		Rs.	
					I.—Reserved Forests.							The entries in columns 6 and 7 are *estimates* based upon the following data—1,705 self-supporters and free residents houses each of which is allowed
	Bamboos . . . . . No.	20,190	10	26,000	13	113,666	57	73,301	36	233,157	116	200 bamboos, 40 canes, 20 bundles thatching leaves, annually.
	Canes . . . . . ,,	7,660	3	...	...	22,733	7	6,498	2	36,891	12	
	Canes with roots . . . . ,,	...	...	...	...	...	...	...	...	...	...	
	Thatching leaves . . . . bdls.	462	5	7,200	90	11,366	142	131	2	19,15	239	
	Gurjan oil . . . . . lbs.	...	...	...	...	...	...	...	...	...	...	
	Bark . . . . . ,,	66,367	207	...	...	...	...	...	...	66,367	207	
	TOTAL .	...	225	...	103	...	206	...	40	...	574	All the other figures are *actuals*.
Andamans					*II.—Protected Forests.*							
					Nil							
					III.—Unclassed State Forests.							
	Bamboos . . . . . No.	29,168	15	6,000	3	227,334	113	163,478	82	425,980	213	In addition canes exported were taxed and a further sum of Rs. 164 was realised.
	Canes . . . . . ,,	3,694	1	3,000	1	45,467	15	60,432	20	112,593	37	
	Canes with roots . . . . ,,	...	...	...	...	...	...	...	...	...	...	
	Thatching leaves . . . . bdls.	...	...	2,560	32	22,734	284	1,820	23	27,114	339	
	Gurjan oil . . . . . lbs.	68,952	4,309	...	...	...	...	...	...	68,952	4,309	
	Bark . . . . . ,,	9,951	31	...	...	...	...	...	...	9,951	31	
	TOTAL .	...	4,356	...	36	...	412	...	125	...	4,929	
	GRAND TOTAL .	...	4,581	...	139	...	618	...	165	..	5,503	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived

Form No. 59.—[*Prescribed.*]

Account of Timber and other Produce cut or collected by Government Agency and brought to depôts, sold locally, or otherwise disposed of during the year 1902-03.

Particulars.	No. or quantity.	c. ft.	Total of each head. No. or quantity.	Total of each head. c. ft.	Particulars.	No. or quantity.	c. ft.	Total of each head. No. or quantity.	Total of each head. c. ft.
Padouk.									
Balance at commencement of year in sale depôts	611	27,943	...	...	Sold to Settlement for local purpose	124	47,620	...	...
Received from forests in sale depôts	4,607	254,078	...	...	Sold to Public	...	5,889	...	...
Found in depôts on taking stock	60	2,863	...	...	Sold in London depôt	904	39,748	...	...
Received by conversion in saw-mill	1,033	104,921	...	...	Converted in saw-mill	3448	199,172	...	...
					Used by Forest Department	...	3,553	...	...
					Free grants	...	13	...	...
					Found short on taking stock	...	787	...	...
					Sold to Managing Agents, Calcutta Tramway Company	...	596	...	...
					Sold in Calcutta depôt	12	640	...	...
					Sold in Rangoon depôt	...	102	...	...
					Balance at close of year	1,823	91,685	...	...
Total	6,311	389,805	...	...	Total	6,311	389,805	...	...
Koko.									
Balance at commencement of year in sale depôts	51	1,944	...	...	Sold to Settlement for local purpose	...	850	...	...
Received from forests in sale depôts	199	5,862	...	...	Sold to Public	...	77	...	...
Found in depôt on taking stock	...	148	...	...	Converted in saw-mills	96	2,914	...	...
Received by conversion in saw-mills	15	1,469	...	...	Used by Forest Department	...	34	...	...
					Found short on taking stock	38	1,207	...	...
					Balance at close of year	131	4,341	...	...
Total	265	9,423	...	...	Total	265	9,423	...	...
Chuglam, black.									
Balance at commencement of year in sale depôts	31	1,398	...	...	Sold to Settlement for local purpose	...	1,235	...	...
Received from forests in sale depôts	174	8,933	...	...	Sold to Public	...	3	...	...
Found in depôt on taking stock	21	1,870	...	...	Converted in saw-mill	85	4,295	...	...
Received by conversion in saw-mills	32	2,497	...	...	Used by forest department	...	32	...	...
					Free grants	...	5	...	...
					Balance at close of year	173	9,128	...	...
Total	258	14,698	...	...	Total	258	14,698	...	...
Chuglam, white.									
Balance at commencement of year in sale depôts	34	1,632	...	...	Sold to Settlement for local purpose	46	4,715		
Received from forests in sale depôts	794	38,037	...	...	Sold to public	...	75		
Received by conversion in saw-mills	6	3,833	...	...	Sold in London Depot	6	179		
					Converted in saw-mills	151	6,818		
					Used by Forest Department	...	702		
					Free grants	...	8		
					Found short on taking stock	60	2,248		
					Balance at close of year	571	28,757		
Total	834	43,502	...	...	Total	834	43,502		
Marblewood.									
Balance at commencement of year in sale depôts	...	18	...		Sold to Settlement for local purpose	...	6		
Received from forests in sale depôts	69	990	...		Sold to Public	...	29		
Found on taking stock	...	37	...		Converted in saw-mill	34	486		
Received by conversion in saw-mill	1	33	...		Found short on taking stock	...	12		
					Balance at close of year	36	545		
Total	70	1,078	...		Total	70	1,078		
Satinwood.									
Balance at commencement of year in sale depôts	379	94	..	...	Sold to Settlement for local purpose	...	2	...	..
Received from forests in sale depôts	46	15	...	...	Converted in saw-mill	91	19	...	...
Found in depôt on taking stock	65	22	...	...		...	...		
Received by conversion in saw-mills	...	2	...	...	Balance at close of year	399	112	...	...
Total	490	133	...	...	Total	490	133	...	...

Form No. 59—*continued.*

Account of timber and other produce cut or collected by Government Agency and brought to depôts, sold locally, or otherwise disposed of, during the year 1902-1903.

Name of Division.	Balance at commencement of the year in forests and sale depots.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
		Other timber (cubic feet).			
Andamans	19,038	144,921	163,959	103,205	60,754
		Firewood (cubic feet).			
	11,725	992,075	1,003,800	964,950	38,850

Form No. 60A.—[*Prescribed.*]

Abstract showing the value of timber and other produce at sale depôts for the year 1902-1903.

Description of Timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in Value		Remarks.
	No	c. ft.	Value.	No.	c. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
			Rs.			Rs.	Rs.		Rs.
Logs . .	1,713	48,311	1,03,208	4,671	1,83,036	2,38,005	1,34,797	...	For . 1,46,103
Planks . .	...	3,756	3,756	...	12,286	14,085	10,279	...	Against ...
									For . 1,46,103
Firewood . .	...	11,725	444	...	38,850	1,471	1,027	...	
Total .	1,713	63,792	1,07,408	4,671	2,34,172	2,53,511	1,46,103	...	

Form No. 60B—[*Prescribed.*]

Abstract showing the value of live and dead stock for the year 1902-1903.

Description of live and dead stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in Value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
		Rs.		Rs.	Rs.	Rs.	
Elephants .	39	52,462	41	71,992	19,530	...	One elephant, Malatoo, belonging to the Settlement, but used by Forest Department, not included in the list. Seven elephants were purchased during the year, of which one got *musth* was destroyed: 6 arrived at Port Blair on 28th January 1903. Four elephants died during the year. Three purchased previous to February 1902. One received February 1902.
Buffaloes .	6	50	20	413	363	...	Fourteen buffaloes were purchased.
Boats, timber towing	13	5,626	20	10,694	5,068	...	Seven new timber boats built.
Lighters .	2	3,221	2	2,924	...	297	
Carts, small .	2	51	2	44	...	7	
Crane .	1	393	1	335	...	58	
Portable tramway .	13¾ miles 1 locomotive, 51 trucks, 3 trollies.	87,697	19¾ miles 1 locomotive, 67 trucks, 5 trollies.	1,22,909	35,212	...	Six miles portable tramway was purchased.
Office furniture .	...	380	...	361	...	19	
Miscellaneous stores	...	...	...		...	...	For 66,510 Against 714
Axes, dahs, winches, etc., etc. .		4,786	...	4,459	...	327	For 65,796
Dingy .	2	143	2	137	...	6	
Forester's boat .	1	88	1	112	24	...	
Steam-launch *Eileen*	1	11,326	1	12,095	769	...	
Jolly boats .	3	530	3	574	44	...	
Buildings .	...	...	...	5,500	5,500	...	At Wimberley Gunj and Anikhet.
Total .	...	1,66,753	...	2,32,549	66,510	714	

Form No. 61.—[*Prescribed.*]

Summary of Revenue of the Andamans Division during Forest Year 1902-03.

REVENUE.

	Rs.	A.	P.
I.—Timber and other Produce removed from the Forests by Government Agency—			
(*a*) Timber	2,93,794	0	0
(*b*) Firewood and charcoal	33,754	0	0
(*c*) Bamboos	.....		
(*d*) Sandalwood	.....		
(*e*) Grass and other minor produce	4,138	0	0
Total I	3,36,686	0	0
II.—Timber and other Produce removed from the Forests by Consumers or Purchasers—			
(*a*) Timber	955	0	0
(*b*) Firewood and charcoal	26	0	0
(*c*) Bamboos	16	0	0
(*d*) Grazing and fodder grass	.....		
(*e*) Other minor produce	287	0	0
(*f*) Forest stamps	.....		
(*g*) Other items	.....		
(*h*) Commutation fees	.....		
Total II	1,284	0	0
III.—Drift and Waif wood and Confiscated Forest Produce	.....		
Total III	.....		
IV.—Revenue from Forests not managed by Government—			
(*a*) Duty on foreign timber and other forest produce	.....		
(*b*) Revenue from shared and private forest	.....		
Total IV	.....		
V.—Miscellaneous—			
(*a*) Fines and forfeitures	.....		
(*b*) Refunds	90	0	0
(*c*) Other sources	359	0	0
Total V	449	0	0
GRAND TOTAL REVENUE	3,38,419	0	0

Form No. 61—[*Prescribed.*]

Summary of Expenditure of the Andamans Division during the Forest year 1902-03.

	Rs	A.	P.
I.—Timber and other produce removed from the Forests by Government Agency—			
a. Timber	1,59,753	0	0
b. Firewood and charcoal	15,674	0	0
c. Bamboos	.....		
d. Sandal-wood	.....		
e. Grass and other minor produce	2,427	0	0
Total A. I	1,77,854	0	0
II.—Timber and other produce removed from the Forests by Consumers or Purchasers	.....		
Total A. II	.....		
III.—Drift and Waif wood and Confiscated Forest Produce	.....		
Total A. III	.....		
IV.—Revenue from Forests not managed by Government—			
a. Duty on foreign timber and other forest produce	.....		
b. Revenue from shared and private forests	.....		
Total A. IV	.....		
V.—Rent of leased Forests and payments to Shareholders in Forests managed by Government	.....		
Total A. V	.....		

	Rs.	A.	P.
VI.—Live Stock, Stores, Tools and Plant—			
a. Purchase of cattle	23,542	0	0
b. Feed and keep of cattle	26,795	0	0
c. Purchase of stores and plant	3,859	0	0
Total A. VI	54,196	0	
VII.—Communications and Buildings—			
a. Roads and bridges	10,410	0	0
b. Buildings	2,246	0	0
c. Other works	.....		
Total A. VII	12,656	0	0
VIII.—Organization, improvement and extension of Forests—			
a. Demarcation	.....		
b. Cost of Settlements—compensation for land and rights	.....		
c. Surveys	.....		
d. Working plans	225	0	0
e. Sowing and planting	2,206	0	0
f. Protection from fire	.....		
g. Other works	.....		
Total A. VIII	2,431	0	0
IX.—Miscellaneous—			
a. Law charges	.....		
b. Other charges	6,531	0	0
Total A. IX	6,531	0	0
Total A.—Conservancy and Works	2,53,668	0	0

B.—ESTABLISHMENTS.

I.—Salaries—			
a. Conservators	.....		
b. Superior officers	12,600	0	0
c. Subordinate forest and depot establishments	4,145	0	0
d. Office establishments	2,189	0	0
e. Deputation and special allowances	600	0	0
f. Exchange compensation allowance	600	0	0
Total B. I	20,134	0	0
II.—Travelling Allowances—			
a. Conservators	.....		
b. Superior officers	2,860	0	0
c. Subordinate forest and depôt establishments	173	0	0
d. Office establishments	.....		
Total B. II	3,033	0	0
III.—Contingencies—			
a. Stationary	16	0	0
b. Carriage of tents and records	.....		
c. Rents, rates and taxes	.....		
d. Pay of police guards	.....		
e. Official postage	110	0	0
f. Sundries	549	0	0
Total B. III	675	0	0
Total B.—Establishments	23,842	0	0
GRAND TOTAL OF EXPENDITURE	2,77,510	0	0
SURPLUS	60,909	0	0

S. C. MITRA,

Chief Superintendent (Forests)

CALCUTTA;

The 18th August 1903.

Form No. 62—[*Prescribed.*]

Account Current for the Forest year 1902-03.

RECEIPTS.	R	a.	p.	R	a.	p.	PAYMENTS.	R	a.	p.	R	a.	p.
Cash Balance	...			1	12	6	I—Refunds and Drawbacks	...			...		
VIII—Assessed Taxes—							Expenditure as per Annual Summary Form No. 61	...			2,77,510	1	6
Income Tax—Deductions from salaries	...			323	11	8	Forest Deposits	...			...		
Revenue as per Annual Summary Form No. 61	...			338,419	4	3	Forest Advances	...			48,843	6	10
XII—Interest—	...			...			Suspense Account	...			...		
Forest deposits	...			...			Savings Bank Deposits—						
Forest advances	...			40,233	8	0	Bank Account—						
Suspense account	...			...			Forest Officers' Provident Fund	...			...		
Service funds—							Cash Remittances—Local—Forest Remittances—						
Uncovenanted Service Family Pension Fund, Bengal	...			...			Remittances to Treasuries	1,70,173	0	11	...		
Savings Bank Deposits—							Unpaid cheques written back	...			...		
Bank Account—							Inter-divisional Transfers	...			1,70,173	0	11
Forest Officers' Provident Fund	...			1,110	0	0	Account Current with Foreign States—						
Special Account—							Berar Suspense Account	...			...		
General Family Pension Fund	...			210	0	0	His Majesty's Colonial Government, Ceylon	...			...		
Cash Remittances—Local—Forest Remittances—							Exchange Account with other Governments—						
Forest cheques drawn	1,58,096	10	7	...			Account between India and Bengal—						
Revenue Remittances written back	...			...				...			...		
Inter-divisional Transfers	...			1,58,096	10	7	IV—Items adjustable by Bengal	650	0	0	650	0	0
Account Current with Foreign States—								...			...		
Berar Suspense Account	...			...			Inter-Departmental Transfers—	...			...		
His Majesty's Colonial Government, Ceylon	...			...			Public Works Department, Ordinary Branches (Examiner of Burma)	270	0	0	...		
Exchange Account with other Governments—								...			...		
Account between India and Burma—							,, ,, Railway Branch	...			...		
I—Forest Remittances to India from Burma	33	7	6	33	7	6	Military Department, Bengal Command	1	13	6	...		
							,, ,, Punjab ,,	...			...		
Inter-Departmental Transfers—							,, ,, Madras ,,	...			...		
Public Works Department, Ordinary branches	23,837	13	3	...			,, ,, Bombay ,,	...			...		
,, ,, ,, Railway branch	...			...			Telegraph Department	...			...		
Military Department, Bengal Command	1,771	10	6	...			Post Office Department	...			...		
,, ,, Punjab ,,	...			...			Marine Department	3,576	6	10	...		
,, ,, Madras ,,	...			...			Civil Departments	1,30,497	8	4	1,34,345	12	8
,, ,, Bombay ,,	...			...									
Telegraph Department	...			...									
Post Office Department	...			...			Cash Balance	...			228	4	5
Marine Department	77	5	3	...									
Civil Departments	67,630	6	7	93,317	3	7							
GRAND TOTAL	...			6,31,750	10	4	GRAND TOTAL	...			6,31,750	10	4

Form No. 63.—[*Prescribed.*]

Revenue received and outstandings on account of Revenue during 1902-03.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the Department at end of year.	Rem
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Andamans	Timber, Firewood and Gurjan oil, etc.	1,504 10 5	3,48,627 1 4	3,60,131 11 9	3,36,692 4 8*	23,439 7 1	* Rs. , 6 written f.
	Other revenue ...	...	1,733 7 1	1,733 7 1	1,733 7 1	...	These outstandings are all on account of produce supplied to Settlement Officers in June and were recovered in July and August 1903 in the ordinary course of events.
	Total ...	11,504 10 5	350,360 8 5	3,61,865 2 10	3,38,425 11 9	23,439 7 1	

Calcutta ;
The 30th September 1903.

C. G. ROGERS,
Deputy Conservator of Forests, Andamans.

Form No. 64—[*Prescribed.*]

Outstandings and Liabilities on account of Coniractors and Disbursers for the Forest year 1902-1903.

Division.	Department Debtor.			Department Creditor.			Balance Due.	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	8,629 8 5	40,233 8 0	48,863 0 5	21 4 7	48,843 6 10	48,864 11 5	1 11 0	...
Total .	8,629 8 5	40,233 8 0	48,863 0 5	21 4 7	48,843 6 10	48,864 11 5	1 11 0	...

S. C. MITRA,
Chief Superintendent (Forests).

Calcutta ;
The 18th August 1903.

Form No. 65—[*Prescribed.*]

Financial results of the year 1902-1903.

Division.	Timber and other produce removed from the Forests by Government Agency.		Other Revenue.		Formation, protection and improvement of Forests.	Total.	
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Andamans .	3,36,686	2,68,533	1733	74	8,232	3,38,419	2,77,510
Total .	3,36,686	2,68,533	1,733	745	8,232	3,38,419	2,77,510

C. G. ROGERS,
Deputy Conservator of Forests, Andamans.

Port Blair ;
The 30th September 1903.

G. I. C. P. O.—No. 542 R. & A.—22-1-1904.—185.

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PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1903-04.

CALCUTTA:
OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1905.

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No. 1622, dated the 19th October 1904.

From—H. GRAHAM TAYLER Esq., Officiating Chief Commissioner, Andaman and Nicobar Islands, and Superintendent of Port Blair,

To—The Secretary to the Government of India, DEPARTMENT OF REVENUE AND AGRICULTURE.

I have the honour to submit, in original, letter No. 1624, dated the 7th instant, from the Deputy Conservator of Forests, Port Blair, together with his annual report for the year 1903-04, with forms and appendices.

2. The progress made was good, due to the active and able management of Mr. C. G. Rogers who held charge of the Division throughout the year.

3. The total receipts amounted to Rs. 4,77,894 and the total charges to Rs. 2,89,150, leaving a surplus of Rs. 1,88,744, or Rs. 1,27,835 more than in the preceding year.

4. The points noticeable in the report are:—

(*a*) the inspection of the Division by the Conservator of Forests, Tenasserim Circle;

(*b*) the exploration of parts of the South and Middle Andamans conducted by Mr. Rogers;

(*c*) the excavation of a canal for rafting purposes uniting the Middle Straits and Port Meadows;

(*d*) the laying down of the new steam timber boat "Rosamond";

(*e*) the contract to supply 12,000 tons of padouk to Messrs. Gillanders, Arbuthnot & Co., Calcutta;

(*f*) the employment of a larger number of self-supporting convicts;

(*g*) the reduction of the percentage of waste in conversion at the Chatham Saw Mill.

No. 1624, dated the 7th October 1904.

From—B. B. OSMASTON, Esq., F.C.H., Deputy Conservator of Forests, Andamans,

To—The Chief Commissioner, Andaman and Nicobar Islands, and Superintendent, Port Blair.

I have the honour to forward herewith the annual report of Forest Administration in the Andamans for 1903-04. The present report has been compiled according to the instructions conveyed in Government of India, Revenue and Agriculture Department, No. 10 F., dated 5th August 1904.

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1903-04.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

I.—ALTERATION OF AREAS.

Form No. 46 shows that there has been no alteration in area in the Reserved Forests; 24 acres of unclassed forest have been cleared for cultivation in the vicinity of the Settlement.

II.—FOREST SETTLEMENTS.

2. No forest settlements were made during the year.

III.—DEMARCATION.

3. No clearing of boundaries was undertaken, as it was considered unnecessary.

IV.—FOREST SURVEYS.

4. No surveys have been made in the year under report.

5. There has been no expenditure under the head of Constitution of State Forests.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—REGULATION OF MANAGEMENT.

(a) Preparation and Control of Regular Working-Plans.

6. No working-plans have as yet been made for the Andamans forests.

(b) Preliminary Working-Plan Reports.

7. With a view to ascertain as far as possible the stock of mature Padouk available, the exploration of the South and Middle Andamans and of the adjacent islands was sanctioned by the Government of India in their No. $\frac{1078 \text{ F.}}{211\text{-}4}$, dated 8th September 1903, and this work was carried out by Mr. C. G. Rogers, Deputy Conservator of Forests, in charge of the Andamans Division, over the following areas:—

Baratang Island and the small islands to the east of it; the portions of the South Andaman not previously explored; the Labyrinth islands; Rutland

island; the islands in Ritchies archipelago except Sir Hugh Rose and Neill; the south-east corner of the Middle Andaman behind Long island.

The time occupied by the exploration was about 5½ months, *i.e.*, from the 10th December 1903 to the 1st June 1904.

The information obtained by Mr. Rogers will form the subject of a special report, which will no doubt materially assist in bringing these forests under systematic working.

The cost incurred on the above exploration work amounted to Rs. 593.

(*c*) *Plans of operations.*

8. An annual plan of operations was drawn up for the year under report, and all important provisions have been duly carried out.

II.—Communications and Buildings.

(*a*) *Roads and Bridges.*

9. The total expenditure incurred on tramways was Rs. 27,827 against Rs. 10,410 in 1902-03.

Of this sum Rs. 27,665 was spent upon new works and Rs. 162 on repairs.

The Wimberley Gunj permanent steam tramway track was extended by ¾ mile in addition to ½ mile of the existing track, which had to be regraded.

Altogether 2½ miles of track have now been completed, and about 4½ miles remain, the last 3 miles of which will be very easy work, as the line will then run along the level.

Four masonry culverts, 755 feet of retaining walls, and 700 feet of masonry drains, were also constructed in connection with the steam tramway.

Temporary Tram lines.

10. Two and a half miles of temporary tram lines were taken up during the year, and 5 miles were laid down, of which 2½ miles were for timber transport and 2½ miles for fuel.

The length of temporary tram lines in use at the close of the year was as follows:—

	Miles.
Wimberley Gunj timber tramway	8½
Shaitan Khari Temple Gunj timber tramway	9
Bindraban fuel tramway	1½
Namunaghar fuel tramway	4¼
Total	18¼

(*b*) *Buildings.*

11. The expenditure under this head amounted to Rs. 1,516 during the year, as against Rs. 2,246 in 1902-03. Of this Rs. 1,065 was spent on new works and Rs. 451 on repairs.

The permanent buildings taken in hand during the year were:—

(1) A dwelling house with cook-house for the Range Munshis at Wimberley Gunj.

(2) A guard's house at Kalatang.

(3) A barrack for convicts at Wimberley Gunj, 120′ × 18′.

The last was, however, only half completed within the year.

Temporary rest-huts for officers were constructed at Port Meadows and Baratang Island at a cost of Rs. 7, or Rs. 3-8 each.

New temporary barracks for convicts were also built at Putatang, North and South Constance Bay, Tytler's Ghat, Port Meadows and Baratang Island, and temporary guard-houses at Temple Gunj, North Constance Bay, Port Meadows, and Baratang Island.

(*c*) *Miscellaneous works.*

12. A canal 2,068 feet long, 16 feet wide, and 5 feet deep, was dug connecting two creeks leading into Port Meadows and the Middle Straits, respectively, at a cost of Rs. 151. This was done at the suggestion of Deputy Ranger Hussain Ali.

The importance of this canal, when taken in conjunction with the similar channel constructed last year from Kutara into Port Meadows, can scarcely be overestimated, through communication by water suitable for rafting having been thereby established between the Middle Andaman and Port Blair.

III.—Protection of Forests.

(*a*) *General Protection.*

13. Twenty-one cases, involving 84 persons, were taken into Court during the year, all for removal of timber or of minor forest produce.

Of these, 19 resulted in convictions, and 2 in acquittals.

Form No. 52 gives full details of these cases.

(*b*) *Protection from fire.*

14. Special precautionary steps against fire are unnecessary, as the forests are practically uninflammable.

(*c*) *Protection from cattle.*

15. With the exception of the Navy Bay Forest Reserve, all other areas which have been notified as Reserved Forests have been closed to the grazing of cattle, *vide* Local Government Notification No. 1, dated 10th May 1904.

(*d*) *Protection against injuries from natural causes.*

16. The marine worm (Teredonavalis) is still responsible for much damage to timber in Depôt. This can only be avoided in one of two ways :—

(1) Disposing of the timber as soon as it arrives from the forest,

or (2) Keeping it in dry depôts.

(1) is at present impracticable,

but (2) will be introduced as regards the more perishable timbers as soon as suitable sites for such depôts are available.

IV.—Sylviculture.

(*a*) *Natural reproduction.*

17. Natural reproduction of Padouk and the other more valuable species is remarkably scarce. In fact, the present condition of the forest would appear to be unsuited to the unaided reproduction of any light-demanding tree.

Seedlings and saplings of other less important kinds, *e.g.*, Garjan (*Dipterocarpus sp.*), white Chuglam (*Terminalia biatata*), and white Bombway (*Terminalia procera*) are in many places fairly numerous.

(*b*) *Artificial reproduction.*

(*i*) Regular plantations.

18. One hundred acres of mangrove swamp in the Brigade Creek, and 18 acres in the Dhani Khari Reserve, have been sown up 4′×4′ with mangroves.

In addition to the above, blanks in previous mangrove plantations were filled up over an area of 56 acres.

Mangrove sowings have proved cheap as well as successful; Rs. 4 per acre being sufficient to completely restock swampy areas including the cost of collection of seed and other contingent expenses.

(*ii*) Taungya plantations.

19. One hundred acres of mixed forest between Wimberley Gunj and Goplakabang was cleared of vegetation (by cutting and burning), and sown 6′×6′ with Padouk. The seed has germinated well and the plantation promises to be a success.

(*c*) *Operations for the improvement of the growing stock.*

20. No such operations have been started.

(*d*) *Experiments.*

21. In accordance with the suggestion contained in paragraph 4 of the Government of India's No. 317 F., dated 17th March 1903, a party of 10 men were employed for some time under supervision searching for natural reproduction of Padouk with a view to freeing it from the surrounding growth. Practically no seedlings or saplings of this species could, however, be found, so the experiment was discontinued.

Experimental sowings of two species of Gorjan (*Dipterocarpus sp.*) were made in order to ascertain if possible the best conditions for their successful germination and subsequent growth.

The seed has germinated and the results will be carefully watched.

It is proposed to conduct similar experiments in the future with other of the more important timber-yielding species, in respect of which the conditions which favour reproduction are at present completely unknown.

V.—Exploration.

(*a*) *System of management.*

(*i*) Major Forest Produce.

22. No system has as yet been introduced into the working of these forests, the fellings for both timber and fuel being "unclassed."

In the more remote forests which are at present being worked, Padouk alone is extracted, all mature trees being removed wherever such are found.

In the intermediate areas all mature timber trees of marketable kinds are removed as the demand for them arises.

In the forests around Port Blair, from which all Padouk has long since disappeared, fuel fellings are being carried on. In such areas all the Gorjan trees, which usually constitute half or more of the upper storey, are reserved as standards or seed-bearers.

(*ii*) MINOR FOREST PRODUCE.

23. Bamboos, canes, and thatching leaves, are cut wherever they are found by Departmental agency, or by purchasers, without any sylvicultural restriction.

Gorjan trees are tapped for oil departmentally, only those above 6 feet in girth being so treated.

Mangrove bark is collected for tanning and dyeing in swamp forests outside the limits of the area from which the fuel supply of the Settlement is drawn. The removal of the bark kills the mangroves, but natural reproduction in such forests being excellent, blanks caused by barking operations soon fill up again.

(*b*) *Agency of Exploitation.*

(*i*) DEPARTMENTAL AGENCY.

24. Practically the whole of the timber and fuel extracted from these forests is exploited by departmental agency.

(*a*) *Timber.*

25. The whole of the timber extracted comes out in the log, which is brought to Port Blair for conversion or export.

The round logs are dragged by elephants to the nearest creek or to the sea-face as the case may be, where they are made up into rafts consisting of from 40 to 120 logs, and towed into Port Blair or to one of the two tramway termini. Owing to improvements in the method of constructing the rafts, it has been possible to raft timber along one coast or the other throughout the year.

The number and volume of logs brought into Port Blair or to a tramway terminus depôt is as follows :—

	Number of logs.	Number of tons.
To Port Blair	2,977	3,532
„ Kalatang tramway terminus	2,052	1,629
„ Temple Gunj tramway terminus	142	119
TOTAL .	5,171	5,280

The distance which rafts have had to be towed varies from 2 to 20 miles by open sea, and from about the same distances by sheltered creeks, the average total distance of water transport being 16 miles.

No losses of logs during rafting occurred this year, the few logs which broke away having all been subsequently recovered.

26. Rafting in the open sea, however, must always entail considerable risk, which will be obviated to a large extent when the steam timber boat, now under construction, comes into use.

This boat, for which a sum of Rs. 1,13,000 has been sanctioned, was laid down on the 1st of June 1904, and will, it is hoped, be completed before the end of June 1905.

Her hull is to be constructed of wood in view of the dangerous nature of the coast she will frequent, and to the fact that many of the creeks and passages to be negotiated are as yet unsurveyed.

Her length over all will be 173 feet and her breadth 26 feet. Her mean draught unloaded will be 6 feet, and 9 feet when full of timber. She will be fitted with twin screw and engines capable of developing 350 indicated horse power, and will be provided with two rowing boats and a small oil cutter.

She will carry, when fully loaded, about 200 logs averaging, say, a ton each in measurement.

27. Form No. 65 shows that the total expenditure on timber and other produce removed from the forests by Government agency during the year was Rs. 2,78,133.

In order to obtain the *local* cost of extraction of timber, the following amounts must be deducted from the above sum :—

		Rs.
A-I *a.*	Freight and other charges in connection with export timber after leaving Port Blair	77,222
	Cost of conversion of timber at the Chatham Saw Mills	24,829
	Miscellaneous	2,703
A-I *b.*	Extraction of fuel	17,387
A I *e.*	Extraction of Gorjan oil	4,472
A VI *a.*	Purchase of buffaloes	440
A VI *c.*	Purchase of stores not connected with timber extraction	13,000
A VII *a.*	Expenditure on temporary fuel tramways	19,674
	Expenditure on permanent steam tramway	8,706
A VII *b.*	Construction of permanent buildings	153
A VIII *d.*	Exploration	593
A VIII *e.*	Planting, etc.	2,631
A IX *b.*	Miscellaneous	453
B.	Pay and allowance for 8 months of an Assistant Conservator of Forests lent for exploration duty	5,828
	One-sixth of Rs. 17,607 for supervision of fuel works.	2,801
	TOTAL	1,80,892

This leaves :—

Chargeable to local extraction of timber	97,241

To this we must add :—

(1) Interest for one year at 5 per cent. on Rs. 62,285, the value of 39 elephants at the beginning of the year	3,114
(2) Depreciation for one year at 10 per cent. on the same 39 elephants	6,229
(3) Depreciated value of "Anarkali," who died on 18th August 1903	3,803
(4) Depreciated value of "Ram Parshad," who died on 15th October 1903	5,904
TOTAL	1,16,291

Form No. 57 shows that 452,622 c. ft. or 9,052 tons of timber were extracted during the year. This brings the cost of extraction to Rs. 12-13 per ton as against Rs. 12-8 per ton for 8,445 tons extracted last year.

This slight increase is due to the greater average distance from which the logs had to be carried.

(*b*) *Fuel.*

28. The revenue derived from sales of fuel amounted to Rs. 42,960, as against Rs. 36,530 during 1902-03.

The amount of fuel extracted was 12,619½ cords, nearly all of which was supplied to the Settlement.

It is brought by tramway for varying distances, averaging 2¾ miles from the forest under exploitation to the nearest creek, whence it is removed to Port Blair in lighters.

(*c*) *Minor Produce.*

29. Gorjan oil was collected departmentally as usual from the 16th January to the 20th May 1904.

The locality worked lies between Anikhet, Constance Bay, and Port Mouat.

The amount of oil collected was 12,650 gallons, as against 6,895 gallons last year, and the revenue received was Rs. 7,830, compared with Rs. 4,309 in 1902-03.

The whole of this oil is used locally in conjunction with earth oil and red oxide for painting roof shingles.

30. One thousand one hundred and eighty-two maunds of Mangrove bark were collected for the Phœnix Bay Workshops, as compared with 880 maunds last year.

The royalty realized upon this bark was Rs. 295.

(*ii*) PURCHASERS.

(*a*) *Timber.*

31. The volume and kind of timber removed by purchasers was as follows:—

	Cubic feet.
From Reserved Forests.	
II Class timber	131
III Class timber	6,892
TOTAL	7,023
From Unclassed Forests.	
III Class timber	10,125
GRAND TOTAL	17,148

This is 3,591 c. ft. more than in 1902-03.

(*b*) *Fuel.*

32. The quantity of fuel extracted during 1903-04 was 2,100 c. ft., or 1,312 c. ft. less than in 1902-03.

(*c*) *Minor Produce.*

33. Bamboos, canes, and thatching leaves were removed from Government forest to the value of Rs. 227, or Rs. 88 more than in the previous year.

(*iii*) RIGHTS AND PRIVILEGES.

34. None.

(*iv*) FREE GRANTS.

35. Free grants of inferior poles and minor forest produce were made as usual to Settlement officers for the construction and maintenance of convict barracks, and also to free residents and self-supporter convicts for repairing their huts.

The value of these free grants amounts to Rs. 26,969 in the case of District Officers, and Rs. 18,614 for the local population.

Details of the kind and quantity of forest produce supplied are shown in Forms Nos. 57 and 58.

(c) *Outturn and sources of forest produce.*

36. The following table compiled from Forms Nos. 57 and 58 gives the outturn of the Reserved and Unclassed forests according to the agency of exploitation, and compares the yield with that of 1902-03 :—

Agency of exploitation.	Reserved Forests.		Protected Forests.		Unclassed Forests.		Total.	
	1903-04.	1902-03.	1903-04.	1902-03.	1903-04.	1902-03.	1903-04.	1902-03.
1	2	3	4	5	6	7	8	9
	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c. ft. solid.	c ft. solid.
Government . .	2,72,941	2,98,466	...	...	1,79,681	1,23,774	4,52,622	4,22,240
Purchasers . .	7,023	5,491	...	...	11,625	10,066	18,648	15,557
Free Grantees .	...	8,525	...	...	27,510	17,050	27,510	25,575
District Officers .	2,556	12,532	...	...	57,335	60,013	59,891	72,545
Total .	2,82,520	3,25,014	...	...	2,76,151	2,10,903	5,58,671	5,35,917
Difference in favour of (+) or against (−) 1903-04.	−42,494		—		+65,248		+22,754	

37. The total outturn of timber in the rough is 22,754 cubic feet solid more than last year.

The decrease in outturn from the Reserves and increase from Unclassed forest is due to the transfer of work from the Port Meadows Reserve to the Middle Straits and Boratang unclassed forests.

38. The volume of timber and poles which make up the total outturn of timber compared with the outturn of last year is shown below :—

Nature of produce.	1903-1904. Cubic feet solid.					1902-1903. Cubic feet solid.				
	Government.	Purchasers.	Free grantees.	Settlement Officers.	Total.	Government.	Purchasers.	Free grantees.	Settlement Officers.	Total.
Timber .	4 47,747	17,148	...	...	4,64,895	4,09,215	13,557	...	...	4,32,772
Poles . .	4,875	1,500	27,510	59,891	93,776	3,025	2,000	25,575	72,545	1,03,145
Total .	4,52,622	18,648	27,510	59,891	5,58,671	4,22,240	15,557	25,575	72,545	5,35,917

The timber removed by Government agency was greater by 28,532 cubic feet, and that removed by purchasers by 3,591 cubic feet, as compared with the similar figures for 1902-03. The total volume of poles removed by all agencies was 9,369 cubic feet less than last year.

The volume of the poles removed by the Settlement officers was 12,654 cubic feet less than in 1902-03.

The number of Padouk and other trees cut this year and last year are as follows :—

Year.	Number of trees felled.		
	Padouk.	Others.	Total.
1903-04	3,712	1,677	5,389
1902-03	2,778	2,222	5,000
Difference in favour of 1903-04	+934	—545	+389

This shows a substantial increase in the exploitation of Padouk, which is necessary in order to be able to supply the 12,000 tons to be delivered to Messrs. Gillanders, Arbuthnot & Co. within the three years' period covered by the contract.

39. The volume of timber in the log extracted departmentally, as compared with that extracted last year, is shown below :—

Year.	Volume of timber in the log.	
	C. ft. solid	or tons.
1903-04	4,52,622	or 9,052
1902-03	4,22,240	or 8,445
Difference in favour of 1903-04	+30,382	+607

40. The daily average number of elephants at work in the division was 27, as compared with 26 in 1902-03.

These figures show that each elephant has dragged out on an average 1·1 tons of timber daily, and this over an average distance of 1 to 1½ miles.

The average daily number of convicts employed on timber extraction was 546, as compared with 449 men in 1902-03. This figure is inclusive of self-supporters. Forty-eight more self-supporters were employed, as compared with the previous year.

The following table shows the issues from Haddo depôt in 1903-04, as compared with those of 1902-03 :—

	1903-04. C. ft.	1902-03. C. ft.
Sales.		
(1) *Local.*		
Eastern District officer	...	3,641
Port Officer	9,834	5,628
Government Departments in India.		
Deputy Director, Royal Indian Marine, Calcutta,	423	4,579
Issued to Chatham Sawmill for conversion	2,64,444	2,86,662
Foreign Sale Depôts.		
Padouk logs sent to Messrs. Ogilvy, Gillanders & Co., London	...	3,307
Sample log sent to Messrs. Shrank & Co., Glasgow	74	...
Sold to Messrs. Gillanders, Arbuthnot & Co., Calcutta	29,999	...
Sent to Messrs. Turner, Morrison & Co., Calcutta	385	...
Sent to Messrs. Gillanders, Arbuthnot & Co., Calcutta	16	...
Sold to Executive Engineer, Maymyo	73	...
Total	3,05,248	3,03,817

The issues from the Haddo depôt during the year have increased by 1,431 cubic feet, or 29 tons, as compared with last year.

The 29,999 cubic feet of Padouk logs sold to Messrs. Gillanders, Arbuthnot & Co. is in part fulfilment of the contract, dated 16th December 1903, for 12,000 tons of timber. This was shipped from 27th February to 30th June 1904.

41. *Chatham Sawmills.*—The Chatham Sawmills, which belong to the Penal Settlement, was managed by the Deputy Conservator of Forests throughout the year. The mill was closed for the following days during the year in addition to Sundays and notified holidays :—

July 1903	. .	6 days for cleaning boilers and repairing machinery.
November 1903	.	17 days for repairing boilers and relining furnaces with fire-bricks.
March 1904	.	6 days for cleaning boilers.
June 1904	. .	6 days for ditto.

The tramway laid down in the yard last year has effected a very great saving in convict labour. It has been extended to the North side of Bhusi ghat, and also to the police ghat to allow of lighters being loaded during the south-west monsoon.

No new machinery was added during the year. The old 40″ rope feed saw bench was repaired and kept going, the old frame saw repaired last year has been worked regularly, but it should be replaced by a new machine. The shafting was extended to provide a force draught for the blacksmith's forge.

The daily average number of convicts employed in the mills during the year under report was 144, compared with 138 in 1902-03.

42. The receipts of timber in the rough and the yield of converted timber compared with 1902-03 were as below :—

Year.	Receipts of timber in the log.						Outturn of sawn timber.			Percentage of waste.		
	Padouk.		Others.		Total.							
	Number of logs.	Volume c. ft.	Number of logs	Volume c. ft.	Number of logs.	Volume c. ft.	Padouk c. ft.	Others c. ft.	Total c. ft.	Padouk.	Others.	Total.
1903-04 . .	2,804	1,46,548	2,579	1,17,896	5,383	2,64,444	78,751	62,467	1,41,218	46	47	46
1902-03 . .	3,448	1,99,172	2,253	77,546	5,701	2,76,718	1,04,921	35,663	1,40,584	47	54	50
Difference	—644	—52,624	+326	+40,350	—318	—12,274	—26,170	+26,804	+634	—1	—7	—4

The outturn of sawn timber in 1903-04 was 634 cubic feet more than the previous year.

The percentage of waste is 46 compared with 50 last year. This decrease is due to larger quantities of unsound wood being converted into shingles, railway keys, etc., and to the fact that no mill sawn squares are now shipped to Europe under the terms of the new contract.

43. The following table shows in detail how the outturn of the mill has been disposed of :—

Year.	Sent to Calcutta for transmission to London.						Sales at Port Blair.						Sales in India and Burma.												Total issues.
	Padouk.			Other Timber.			To Settlement.			To General Public.			Calcutta.									Rangoon.			
	To meet 2nd Contract for 1,600 tons, dated 21st May 1902.												Messrs. Gillanders, Arbuthnot & Co.	Gladstone, Wylie & Co.	Jessop & Co.	Turner, Morrison & Co.	Stewart & Co.	Captain Penely.	Master of the Mint.	Superintendent, Alipore Jail.	Managing Agent, Calcutta Tramways Company.	Municipal Engineer.	Agency Division, Pegu Circle.		
	Sqs.	Slabs.	Total.	Sqs.	Slabs.	Total.	Padouk	Others.	Total.	Padouk.	Others.	Total.													
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.		c. ft.
1903-04	20,147	10,785	30,932	1,845	6,111	7,956	27,099	28,692	55,791	5,213	3,931	9,224	9,968	4,301	4,146	710	655	13	287	1,260	...	469	...		1,25,712
1902-03	35,988	13,882	49,870	1,668	2,074	3,742	44,188	22,854	67,042	5,888	2,388	,276	676	...	...	...	...	...	...	750	2,206	...	847		1,33,409

The second contract for 1,600 tons mill sawn Padouk squares was completed during February 1904, and the third contract for supplying 12,000 tons Padouk logs was taken in hand during the year.

To improve the sale of Andaman timber, 21,809 cubic feet, or 436 tons, was sent to Calcutta and Rangoon to the firms mentioned above, and to Government Departments, as compared with 4,479 cubic feet, or 90 tons, in 1902-03.

The fifty thousand Padouk and Pyimma shingles sent to Rangoon last year for experimental sale did not prove a success. The shingles were lying in charge of the Deputy Conservator of Forests, Depôt and Agency Division, unsold for some time, and at last were disposed of by public auction.

REMOVAL OF PRODUCE BY PURCHASERS.

(a) Timber.

44. The volume of timber removed by purchasers was 17,148 cubic feet of sawn timber, as compared with 13,557 cubic feet in 1902-03.

(b) Fuel.

45. The quantity of fuel removed by purchasers was 2,100 cubic feet, as compared with 3,412 cubic feet last year.

(c) Bamboos.

46. During the year 36,000 bamboos were removed by purchasers on permits, as compared with 32,000 in 1902-03.

(d) Minor produce.

47. The value of the minor produce extracted in 1903-04 was Rs. 471, as compared with Rs. 287 in 1902-03.

The following produce was removed during the year :—

Ordinary canes	No. 16,500
Canes with roots	„ 42,000
Thatching leaves	Bundles 11,760

48. The total expenditure incurred under management of State Forests is Rs. 2,89,150, details of which will be found in Form No. 61.

CHAPTER III.

FINANCIAL RESULTS.

49. The revenue and expenditure for the year 1903-04 compares as follows with that of the previous year :—

Year.	Financial year.			Forest year.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1903-04	4,32,381	2,66,124	1,66,257	4,77,894	2,89,150	1,88,744
1902-03	3,26,035	2,81,702	44,333	3,38,419	2,77,510	60,909
Difference .	+106,346	—15,578	+1,21,924	+1,39,475	+11,640	+1,27,835

The percentage of the surplus to gross receipts is Rs. 39, as against Rs. 18 in the previous year, and the percentage of charges to gross receipts is Rs. 61, as compared with Rs. 82. This favourable comparison is due to the fact that no elephants were purchased during the year under report.

The principal differences under the budget sub-heads are as follows :—

R. I. a.—Timber removed by Government.

The increase of Rs. 1,30,379 is due chiefly to the export of timbers (almost entirely Padouk) during the year, and to the larger quantity of sawn timber shipped to Calcutta.

R. I. b. Fuel removed by Government.

The increase of Rs. 6,572 under this sub-head is due partly to the larger quantity of fuel supplied, and to the rate being raised from Rs. 3-5 to Rs. 4 per cord during the last 3 months of the year.

A I.a.—The expenditure on removal by Government agency is Rs. 11,727 more than last year, and is principally due to freight on the larger quantity of timber exported.

A I. b.—The increase of Rs. 1,713 is due to the larger volume of fuel extracted.

A VI. b.—The expenditure on the feed and keep of elephants was Rs. 7,171 less than last year. This decrease is due to no elephants having been purchased during the year under report.

A VI. c.—The increase of Rs. 9,549 is principally due to the purchase of stores for the construction of the steam timber boat *Rosamond.*

A VII a.—The increase of Rs. 17,417 more than last year is principally due to the purchase of 3 miles of tramway material for the extraction of fuel.

A VIII. e.—The increase of Rs. 440 under this head is due to more planting work having been done.

A IX. b.—The decrease of Rs 6,079 is due to there having been no freight to pay for elephants, none having been purchased during the year.

50. The following table compares the revenue and expenditure of the last 5 years :—

Years.	Financial year.			Forest year.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1902-03	3,26,035	2,81,702	44,333	3,38,419	2,77,510	60,909
1901-02	2,66,903	1,96,038	70,865	2,57,136	2,11,950	45,186
1900-01	2,77,886	1,40,136	1,37,750	2,70,363	1,39,579	1,30,784
1899-1900	2,60,597	1,40,942	1,19,655	2,91,115	1,41,806	1,49,309
1898 99	2,29,467	1,38,397	91,070	2,27,480	1,39,582	87,898
Average of 5 years ending 1902-03 .	2,72,177	1,79,443	92,735	2,76,902	1,82,085	94,817

Analysis of income derived from Major and Minor Forest produce, giving percentages of—

(*a*) Major or Minor produce as the case may be, and

(*b*) of the total revenue.

Head of Service.	Revenue.	Percentage of Major forest produce.	Percentage of total revenue.	Percentage of net income.
I. *a*	4,29,173	91·2	89·8	227·4
b	40,326	8·6	8·4	21·3
II. *a*	1,082	0·2	0·2	0·6
b	16	...	...	...
Total Major forest produce	4,70,597	100·0	...	...
		Percentage of Minor forest produce.		
I. *c*	3	...	...	...
e	6,109	92·6	1·3	3·2
II. *c*	18	0·3	...	...
e	471	7·1	0·1	0·3
Total Minor forest produce	6,601	100·0	...	...
Other sources	696	...	0·2	0·4
GRAND TOTAL REVENUE	4,77,894	...	100·0	253·2
GRAND TOTAL EXPENDITURE	2,89,150	...	...	...
Net income	1,88,744	...	...	...

Analysis of expenditure under—

(A) Exploitation, extension, constitution, and improvement, and

(B) Administrative, executive, and protective establishments with percentage of totals and grand total expenditure.

Head of service.	Expenditure in Rupees.	Percentage of total under exploitation, extension, constitution and improvement.	Percentage of Grand total expenditure.
A. I. Exploitation	1,93,339	74·5	66·9
VI Ditto.	33,472	12·9	11·6
VII Ditto.	29,343	11·3	10·1
VIII. Extension, constitution, and improvement.	3,239	1·3	1·1
Total exploitation, extension, constitution, and improvement.	2,59,393	100·0	...
		Percentage of total under administrative, executive, and protective.	
B. I. *b*. *e*. and *f*. Administrative II b	21,163	72·2	7·3
B. I. *c*., II. *c*. Executive and Protective	4,910	16·8	1·7
I. I. *d* Office	2,323	7·9	0·8
III. Contingencies	909	3·1	0·3
Total Administrative, Executive, and Protective	29,305	100·0	
Other charges	4·2	...	0·2
GRAND TOTAL EXPENDITURE	2,89,159	...	100·0

The receipts and charges under the three heads of work are extracted from Form No. 65, and compared with similar figures of the last 2 years.

	1903-04.		1902-03.		1901-02.	
	Surplus.	Deficit.	Surplus.	Deficit.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Departmental operations . . .	1,97,478	...	68,153	...	50,144	...
Other revenue	1,367	...	988	...	791	...
Protection	...	10,101	...	8,232	...	5,749
TOTAL .	1,88,744	....	60,909	...	45,186	...

51. The difference in the value of timber and other produce and of live and dead stock at the close of the year was as follows :—

	Timber, etc.	Live and dead stock.
	Rs.	Rs.
Value on 1st July 1903 . . .	2,53,511	2,32,549
Value on 30th June 1904 . . .	1,72,967	2,44,243
Difference .	—80,544	+11,694

The outstandings on account of revenue at the close of the year were Rs. 37,018, as compared with Rs. 23,439 in 1902-03, owing to a larger volume of timber being sold to the Settlement at the end of the year.

The net results of the year's work shows a balance in favour of the year of Rs. 2,14,017, compared with Rs. 2,84,742 in the previous year, as shown below :—

	Rs.
Cash surplus	1,88,744
Add—	
Increased value of stock Form No. 60 B.	11,694
Increase in outstandings of revenue	13,597
Total in favour of the year .	2,14,017

CHAPTER IV.

ADMINISTRATION.

52. Mr. T. B. Manson, Conservator of Forests, Tenasserim Circle, inspected the division between the 4th and 14th May 1904.

His report was submitted to the Chief Commissioner of the Andamans and Nicobars.

53. Mr. C. G. Rogers, Deputy Conservator of Forests, held charge of the division throughout the year.

Mr. H. C. Walker, Officiating Deputy Conservator of Forests, on deputation from Burma, carried on the current duties of the Divisional Officer during the absence of the latter on exploration work in the South and Middle Andamans from the 10th December 1903 to the 2nd June 1904.

Mr. G. T. Wrafter, Extra-Assistant Conservator of Forests, 3rd grade, was attached to the division throughout the year, and has worked conscientiously and well, especially in connection with the construction of the Anikhet and Wimberley Gunj tramways.

Deputy Rangers Hussain Ali and Mohan Lal have displayed considerable energy in the discharge of their Range duties, and rafting work has developed a good deal under their supervision.

The Head clerk Khuda Baksh is both intelligent and hard-working, but the office staff is inadequate, and consequently arrears have been common in the past. Subhan Ali and Durga Singh, 2nd and 3rd clerks, respectively, have both worked in a thoroughly satisfactory manner.

54. The average daily strength of the files (petty officers, labouring convicts, and self-supporters) present on work and sick in hospital, is shown below :—

	Present on work.	Sick in hospital.	Self-supporters.	Total.
Timber extraction	395	104	151	650
Plantation and cultural operations	30	4	4	38
Wimberley Gunj steam tramway construction	71	25	...	96
Anikhet-Temple Gunj tramway construction	12	2	...	14
Chatham saw-mill	144	19	5	168
Firewood extraction	223	...	...	223
Gorjan oil collection	62	...	...	62
Total	937	154	160	1,251

The average daily distribution of the timber extraction file (including self-supporters), compared with last year, is as follows :—

Work.	Details.	Strength of files. 1903-04.		1902-03.	
Supervising convicts, munshis, barrack watchmen, etc.	Jemadar	2		2	
	10 per cent. petty officers	45		46	
	1 per cent. tindal	4		2	
	2 per cent. umedwars	9		9	
	Munshis, watermen, and ration mates	30		31	
			90		90
Transport by water	On steam launch *Eileen*	5		5	
	Building and repairing timber boats, etc.	15		1	
	Crew of timber boats and employed in timber depôts	83		78	
	Rafting timber	15		12	
			118		108
Elephant establishment	In charge of elephants and buffaloes	122		120	
	Making elephant gear and repairing dragging paths	32		30	
			154		150
Barrrack construction	Building barracks, guard-houses, etc.	18		15	
	Repairing barracks, guard-houses, etc.	10		8	
			28		23
Tramways, etc.	Maintenance of 18¾ miles of tramway	16		14	
	Construction of temporary lines	20		8	
	Construction of Wimberley Gunj steam tram line	63		60	
	Construction of Anikhet-Temple Gunj temporary tramway	11		33	
	Construction of channel from Kotora to Port Meadows	...		5	
	Construction of channel from Port Meadows to Middle Strait	2		...	
			112		120
Work of improvement	Valuation surveys	...		3	
	On exploration work	6		...	
	Plantations	30		26	
			36		29
Exploitation	Felling	34		31	
	Squaring	50		44	
	Trucking	41		40	
			125		115
	Total	663		635	

The relations between the Forest officers and the Revenue officials (Settlement officers) have been all that could be desired.

CHAPTER V.

GENERAL.

55. The staff of elephants was 41 at the commencement of the year and 39 at the close, no new purchases having been made and two animals having died during the year.

One "Anarkally" had been ailing for a long time and finally died, apparently from debility.

"Ram Parshad" died from a serious injury received whilst moving logs in depôt.

No qualified elephant doctor has as yet been received. The urgent necessity for an experienced man of this class to look after the health of the valuable stock of Government elephants working in the Andamans is unquestionable.

56. Twenty buffaloes were on stock at the commencement of the year and 32 at the close, 15 having been purchased, of which 3 died.

This is most satisfactory in view of the fact that rinderpest has been very prevalent among the Settlement cattle throughout the hot weather, their numbers having in places been decimated thereby.

The Forest animals were singularly immune, partly no doubt owing to isolation and partly to inoculation with protective serum obtained from the Imperial Bacteriological Laboratory at Muktesar.

57. The steam launch *Eileen* was employed for 275 days in the year, chiefly in towing boats and logs from the tramway termini to Port Blair.

The steam cutter *Pigmy* was made over to the Forest officer to facilitate inspection. She has been invaluable in saving much of the time previously spent in rowing to and from the work to be inspected.

B. B. OSMASTON,
Deputy Conservator of Forests,
In charge, Andamans Division.

PORT BLAIR;
The 30th September 1904.

APPENDIX I.

Descriptive roll of elephants in the Andamans Forest Division on the 30th June 1904.

Serial No.	Name of elephants.	Sex.	Height. Feet.	Height. Inches.	Date of receipt.	Estimated age on 31st March 1892, or on date of receipt, if received later.	Present age.	Number of years elephant has been working.	Condition.	Number of days. At work.	Number of days. At rest.	Number of days. Sick.	Remarks.
1	2	3	4		5	6	7	8	9	10			11
						Y.	Y.	Y. M.					
1	Hannah . .	Female	7	3	Before July 1891.	33	45	More than 13 0	Good, strong . .	115	35	216	Cost price not known.
2	Arnold (Tusker)	Male	8	8	Do. .	41	53	Do. 13 0	Worn out, weak .	...	...	366	Do.
3	Bhairon Pershad (Tusker).	Do.	7	9	December 1895 .	32	41	8½ 0	Good, strong . .	175	31	160	Rs. Cost price 3,488
4	Australia . .	Female	9	1	Before March 1886	28	40	More than 18 0	Do. . .	286	70	10	Cost price not known.
5	Viper . .	Do.	7	9	Do. .	36	48	Do. 18 0	Do. . .	289	70	7	Do.
6	Lutchmi . .	Do.	7	¾	April 1891 . .	32	45	13 0	Good, fairly strong	139	41	186	Rs. Cost price 3,025
7	Sah pah (Tusker)	Male	7	10	March 1894. .	33	43	10 0	Good, strong . .	240	56	70	„ „ 3,538
8	Bhokaung (Tusker).	Do.	7	11	Do. .	36	46	10 0	Do. . .	266	68	32	„ „ 4,088
9	Shwe Daung (Tusker).	Do.	7	¾	Do. .	34	44	10 0	Do. . .	277	64	25	„ „ 3,238
10	Paul, Tusker .	Do.	7	3	Do. 1895. .	30	39	9 0	Do. . .	291	75	...	„ „ 3,763
11	Adulphas (Tusker)	Do.	7	3	Before March 1886	23	35	More than 18 0	Thin, works well .	283	74	9	Cost price not known.
12	Pagi . . .	Female	7	6	March 1894 .	32	42	10 0	Fair, strong . .	284	82	...	Cost Rs. 2,7 3
13	Wellington (Tusker).	Male	8	4½	Do 1895 .	35	44	9 0	Good, strong . .	297	69	...	„ 3,855
14	Maxie . .	Female	6	1	Born in January 1886.	6	18	2 0	Good, light work .	262	104	...	Commenced work 1st July 1902.
15	Oswald (Tusker) .	Male	5	5	Before March 1886	40	52	More than 18 0	Thin, works well .	260	88	18	Cost price not known.
16	Aurangabad .	Female	7	3	May 1892 . .	17	29	12 0	Good, fairly strong .	275	77	14	Rs. Cost price 2,550
17	Jangi Puri . .	Do.	8	2	April 1891 . .	27	40	13 0	Good, strong . .	199	61	106	„ „ 3,025
18	Kate . . .	Do.	7	¾	Before March 1886	22	34	More than 18 0	Do. . .	273	71	22	Cost price not known.
19	Sundri . .	Do.	7	1	Do. July 1891.	56	68	13 0	Worn out, blind .	54	13	299	Do.
20	Mah pah . .	Do.	7	6	March 1894 .	31	41	10 0	Fair, strong . .	225	56	85	Rs. Cost price 2,813
21	Behram (Tusker)	Male	7	10	December 1895 .	28	37	8½ 0	Fair, fairly strong	218	59	89	„ „ 3,3[illegible]
22	Goolabi . .	Female	7	8	March 1895 .	40	49	9 0	Do. .	274	83	9	„ „ 2,605
23	Diamond Jubilee	Male	...	...	Born in August 1897.	5	7	...	Good, a calf . .	...	...	...	...
24	Nineteen hundred	Do.	...	...	Born in January 1900.	3	5	...	Do. . .	...	...	...	...
25	Mabel . .	Female	8	1	11th February 1902.	23	30	2 4	Fair, strong . .	284	76	6	Rs. Cost price 4,523
26	Suraj Mookhi .	Do.	8	2	Do. .	33	35	2 4	Poor, weak . .	115	44	207	„ „ 4,523
27	Lilly . . .	Do.	8	2	Do. .	30	32	2 4	Good, strong . .	289	71	6	„ „ 4,523
28	Raja Sheo . .	Do.	8	3	Do. .	35	37	2 4	Fair, fairly strong .	142	48	176	„ „ 4,523
29	Gulbadan . .	Do.	7	9	Do. .	26	28	2 4	Do. .	240	64	62	„ „ 4,523
30	Rani . . .	Do.	8	1	Do. .	30	32	2 4	Do. .	118	35	213	„ „ 4,523
31	Moti Mallah .	Do.	7	6	Do. .	25	27	2 4	Good, strong . .	274	79	13	„ „ 4,523
32	Delhi . .	Do.	7	8	Do. .	26	28	2 4	Do. . .	248	99	19	„ „ 4,523
33	Khanum . .	Do.	7	9	Do. .	32	34	2 4	Fair, weak . .	85	19	262	„ „ 4,523
34	Meerut . .	Do.	7	10	Do. .	27	29	2 4	Fair, fairly strong .	274	70	22	„ „ 4,523
35	Bhola Nath (Tusker).	Male	8	2	28th January 1903	30	31	1 5	Good, strong . .	237	66	63	„ „ 5,914
36	Amir (Tusker) .	Do.	8	...	Do. .	23	24	1 5	Do. . .	208	76	82	„ „ 5,915
37	Gopal Das (Tusker).	Do.	8	7	Do. .	25	26	1 5	Do. . .	288	75	3	„ „ 6,215
38	Lutchmi Pershad (Tusker).	Do.	8	1	Do. .	30	31	1 5	Do. . .	277	73	16	„ „ 6,415
39	Sundah Pershad (Tusker).	Do.	8	8	Do. .	25	26	1 5	Do. . .	255	83	28	„ „ 5,915
									TOTAL DAYS .	8,316	2,225	2,901	

The following elephants died during the year.

1. Anarkally, died on 18th August 1903. Received on 11th February 1902.
2. Ram Pershad, died on 15th October 1903. Received on 28th January 1903.

B. B. OSMASTON,

Deputy Conservator of Forests, Andamans.

PORT BLAIR;
The 1st October 1904.

ANNUAL FORM No. 46—(*Prescribed.*)

Forest Department, India, Andamans Division.

Area of Reserved Forests, Protected Forests and Unclassed State Forests and Waste lands for the Forest year 1903-04.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1903. Acres.	Area on 1st July 1903. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 30th June 1904. Acres.	Area on 30th June 1904. Equivalent in square miles.	No. and date of Notification of addition or transfer, etc.	Remarks.
			Reserved Forests.								
Andamans	...	Andamans	1. Navy Bay Padouk Plantation Reserve.	10	'04	...	...	10	'04	...	These forests have been simply declared "Reserved Forests" in the local official Gazette in accordance with the policy enunciated by the Inspector General of Forests in his "suggestions" of 1891. The Indian Forest Act is not in force in the Andamans.
			2. Navy Bay Teak Plantation Reserve.	16				16			
			3. Ali Musjid Reserve	14,916	23·	...	...	14,916	23·	...	
			4. Mount Harriett Reserve	28,800	45·	...	...	28,800	45·	...	
			5. Brigade Creek Reserve	2,344	3·66	...	...	2,344	3·66	...	
			6. Dhani Khari Reserve	8,045	12·57	...	...	8,045	12·57	...	
			7. Hope Town Reserve	415	0·65	...	...	415	0·65	...	
			8. Shoal Bay Reserve	9,728	15·20	...	...	9,728	15·20	...	
			9. Port Meadows Reserve	12,160	19·00	...	...	12,160	19·00	...	
			10. Middle Strait Reserve	23,411	36·58	...	...	23,411	36·58	...	
				99,845	156·00	...	...	99,845	156·00	...	
			Protected Forests. *Nil.*								
			Unclassed State Forests and Waste Lands.								
				1,148,917	1,795	...	24*	1,148,893	1,795	...	*These areas were cleared for cultivation by the Settlement.
			Total	...	...	...	...	...	1,951	...	

FORM No. 47.

Statement showing the progress made in, and the expenditure incurred on, Forest Settlements during 1903-04.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year.	Areas finally settled during the year: Number and date of Government order according final sanction to the Settlement.	Name of Forest settled.	Area, in square miles.	Expenditure incurred during the year on areas finally settled: In Forest accounts.	Expenditure incurred during the year on areas finally settled: In other accounts.	Entire cost per square mile of area finally settled during the year.	Areas undergoing settlement: At commencement of the year: Name of tract.	Area, in square miles.	Taken in hand during the year: Name of tract.	Area in square miles.	Expenditure incurred during the year on areas undergoing settlement: In Forest Accounts.	In other accounts.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		sq. ms.				Rs.	Rs.	Rs.					Rs.		
Andamans.	Andamans	156	...	...	...	...	...	...	...	...	...	...	...	...	...

FORM No. 48.

Record of Demarcation and Maintenance of Boundaries, 1903-04.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries not demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans .	...	...	42	42	29	116	187	...	...	

N. B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub-divisions, such as blocks, compartments, coupes.

FORM

Statement of Forest areas surveyed and under

Division.	Areas surveyed and under															
	Special surveys—Maps on 4" scale or over, by Survey of India Department or Forest Survey Branch.								*Ordinary, included in District Surveys.*							
	WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.		
	With details of growing stock.		Without details of growing stock.		Total Cost.	Previous.	Of the year.	Total Cost.	With details of growing stock.		Without details of growing stock.		Previous.	Previous.	Of the year.	Total Cost.
	Previous.	Of the year.	Previous.	Of the year.					Previous.	Of the year.	Previous.	Of the year.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Ms.	Rs.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.
Andamans	...	...	...	...	...	...	...	...	218	...	1,703	...	...	...	...	...

FORM

Progress made in Work

Division.	Areas for which Working Plans have been completed.		Areas for which Working Plans are being compiled.	
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.
1	2	3	4	5
	Sq. Ms.	Sq. Ms.	Ss. Ms.	Sq. Ms.
Andamans	...	...	...	...

FORM

Communications and

Division.	NEW WORK UNDERTAKEN DURING THE YEAR.					
	Buildings.		Roads and Paths.			Total Expenditure on new work.
	Description of Building.	Expenditure incurred.	Road or Path and object of the same.	Length of Road or Path.	Expenditure incurred.	
1	2	3	4	5	6	7
		Rs.		Miles.	Rs.	Rs.
Andamans	New temporary convict barracks.	830	Construction of steam tram road, Wimberley Gunj.		8,274	
	Rest-houses for executive staff.	7	Purchase of 3 miles of rail for fuel extraction.		19,121	
	Police guard houses.	54	Purchase of dog spikes for steam tramway.		266	
	Permanent convict barrack (half).	55	Purchase of a spirit level for steam tramway.		4	
	Subordinates' quarters.	98				
	Temporary truck shed.	7				
	Shed for lime and surkhi.	14				
	Total	1,065	Total		27,665	28,730

No. 49.

survey during the year 1903-1904.

survey during the year.													
Chain and compass or other surveys by local officers.										COST.			
WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			Areas remaining to be taken under Survey.	Total Forest area at end of the year, as per Form No. 46.	Previous.	Of the year.	Entire cost of all surveys to end of the year.	Remarks.
4-INCH OR OVER.		UNDER 4-INCH.		Total cost.	Previous.	Of the year.	Total cost.						
Previous.	Of the year.	Previous.	Of the year.										
18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sq. Ms. ...	Sq. Ms. ...	Sq. Ms. ...	Sq. Ms. ...	Rs. ...	Sq. Ms. ...	Sq. Ms. ...	Rs. ...	Sq. Ms. ...	Sq. Ms. 1,951	Rs. (a)	Rs. ...	Rs. ...	(a) Not accurately known. The Divisional Officer was engaged on exploration work for nearly six months during the year, but as no regular estimate of the growing stock was made, no additions have been made to the areas shown as surveyed.

No. 50.

ing Plans, 1903-04.

Areas for which Working-Plans have still to be taken in hand.	Total Forest area, as in Form No. 46.	Entire cost per square mile, of Working-Plans completed.	Remarks.
6	7	8	9
Sq. Ms.	Sq. Ms.	Rs.	
1,951	1,951	...	Reserved Forests, 156 squa miles. Unclassed State Forests, 1,79 square miles.

No. 51.

Buildings during 1903-04.

REPAIRS EXECUTED DURING THE YEAR.						
BUILDINGS.		ROADS AND PATHS.			Total Expenditure on repairs.	Remarks.
Nature of Repairs.	Expenditure incurred.	Nature of Repairs.	Length repaired.	Expenditure incurred.		
8	9	10	11	12	13	14
	Rs.		Miles.	Rs.	Rs.	
Repairs to temporary convict barracks.	408	Repairs to steam tram road		162		
Repairs to Police guard houses.	33					
Repairs to subordinates' quarters.	10					
TOTAL .	451	TOTAL .		162	613	

132864

FORM No. 52.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Register of breaches of Forest Rules during 1903-04.

FOREST DIVISION.	Cases pending from 1902-03.	NEW CASES OF THE YEAR.					Total Cases.	DISPOSED OF DURING THE YEAR.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		CONVICTIONS.		ACQUITALS.		TOTAL.		
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
Andamans . .	...	...	21	...	...	21	21	19	78	2	6	21	84	...
GRAND TOTAL A	...	...	21	...	...	21	21	19	78	2	6	21	84	...
GRAND TOTAL B	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL C	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N. B.—A. means cases taken into Court.
B. means cases disposed of under section 67 of Indian Forest Act, 1878.
C. means undetected cases.

FORM No. 54.

Area closed and open to grazing during 1903-04.

DIVISION.	AREA IN SQUARE MILES					
	CLOSED TO ALL ANIMALS.		CLOSED TO BROWSERS (CAMELS, GOATS OR SHEEP).		OPEN TO ALL ANIMALS.	TOTAL AREA.
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.	
1	2	3	4	5	6	7
Andamans.	32·65	123·31	*Reserved Forests.* ... | ...		0·04	156
			Protected Forests. *Nil*			
			Unclassed State Forests. .... | ...		1,795	1,795

FORM No. 56—[*Prescribed*].

Area of Plantations, 1903-04.

DIVISION.	Name of Plantation.	AREA IN ACRES.				RECEIPTS.	CHARGES.	REMARKS.
		On 1st July 1903.	Added during the year.	Excluded during the year.	Area on 30th June 1903.	of the year.		
Andamans	*Regular Plantations.*	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	
	Navy Bay . . .	10	...	...	10	...	...	
	Gopiakabang . .	77	100	...	177	...	1,258	
	Brigade Creek Mangrove	170	107	...	277	...	792	
	Dhani Khari „ .	208	18	...	226	...	19	
	TOTAL .	465	225	...	690	...	2,069	
	Cultural Operations.							
	Goplakabang, 1889-90 .	92	...	...	92	...	...	
	Ditto Valley .	5	...	...	5	...	...	
	Namunaghar Padouk .	2	...	...	2	...	...	
	Ditto Mahogany	1	...	...	1	...	...	
	TOTAL .	100	...	...	100	...	...	
	Maintenance of Plantations . . .	...	...	...	...	...	577	Miscellaneous expenditure on the up-keep of existing plantations.
	GRAND TOTAL .	565	225	...	790	...	2,646	

FORM No. 57.

Outturn (in cubic feet, solid) of Timber and Fuel during the Forest year 1903-04 and Agency of exploitation.

FORM

Outturn (in cubic feet, solid) of Timber and Fuel during the

Division.	Timber in the rough: Logs.					Timber in the rough: Poles.					Sawn or square Timber.				
	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	c.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
											I.—Reserved Forests.				
Andamans	1,42,837	...	...	...	1,42,837	4,825	...	...	2,556	7,381	*1,25,279	†7,023	...	...	1,32,302
Total	1,42,837	...	...	...	1,42,837	4,825	...	...	2,556	7,381	1,25,279	7,023	...	...	1,32,302
											II.—Protected Forests.				
											Nil				
Total	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
											III.—Unclassed Forests.				
Andamans	88,631	...	...	...	88,631	50	1,500	‡27,510	57,335	86,395	*91,000	†10,125	...	...	1,01,125
Total	88,631	...	...	...	88,631	50	1,500	27,510	57,335	86,395	91,000	10,125	...	...	1,01,125
GRAND TOTAL	2,31,468	...	...	...	2,31,468	4,875	1,500	27,510	59,891	93,776	2,16,279	17,148	...	...	2,33,427

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it
In the "Remarks" column of this form it should be shown which of the figures entered in it are

No. 57.

Forest year 1903-04 and Agency of exploitation.

Miscellaneous.					Fuel.					Total outturn.	Remarks.
Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.		
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
...	...	...	...	...	...	...	§ 46,488	15,918	62,406	3,44,926	* Rough hewn logs. † Actuals. ‡ An *estimate* based on number of free grantees' huts. Add 10 bullocs =5 cubic feet and 2 posts = 10 cubic feet are allowed for each house. § There are 1,834 house-holders, and quantity of fuel removed per house is estimated at 1⅛ cords per annum; 1 cord = 97½ cubic feet solid.
...	...	...	...	...	...	...	46,488	15,918	62,406	3,44,926	
...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	11,02,206	2,100	§ 1,94,224	2,01,312	15,04,842	17,30,993	
...	...	...	...	...	11,02,206	2,100	1,94,224	2,01,312	15,04,842	17,30,993	
...	...	...	...	...	11,02,206	2,100	2,40,712	2,20,230	15,67,248	21,25,915	

being entered in cubic feet solid.
actuals and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

FORM No. 58—[*Prescribed*].

Outturn of Minor Forest Produce during the year 1903-04.

Description of Produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
	By Government Agency.		By Purchasers.		By Free grants.		By Right-holders.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12
		Rs.		Rs.		Rs.		Rs.		Rs.	
					I.—Reserved Forests.						
Bamboos . . No.	12,850	6	22,000	11	61,100	31	29,200	15	1,25,150	63	The entries in columns 6 and 7 are *estimates* based upon the following data :— 1,834 self-supporters' and free residents' houses, each of which is allowed :— 200 bamboos, 40 canes, 20 bundles, thatching leaves, annually. All the other figures are actuals.
Canes . . . „	3,925	1	16,500	6	12,226	4	...	...	32,651	11	
Canes with roots. „	...	...	42,000	56	...	...	...	...	42,000	56	
Thatching leaves. bdls.	126	2	7,680	96	6,113	76	...	...	13,919	174	
Bark . . . lbs.	78,659	246	...	...	...	...	...	...	78,659	246	
Total .	...	255	...	169	...	111	...	15	...	550	
					II.—Protected Forests.						
					Nil.						
					III.—Unclassed State Forests.						
Bamboos . . No.	11,830	6	14,000	7	3,05,700	152	1,39,234	70	4,70,764	235	
Canes . . . „	6,576	2	...	...	61,134	21	1,45,425	48	2,13,135	71	In addition, canes exported were taxed, and a further sum of Rs. 262 was realized.
Canes with roots. „	...	...	...	...	...	...	...	...	...	...	
Thatching leaves. bdls.	559	7	4,080	51	30,567	382	548	7	35,754	447	
Gorjan . . lbs.	1,26,504	7,906	...	...	...	...	...	...	1,26,504	7,906	
Bark . . . „	15,915	50	...	...	...	...	...	...	15,915	50	
Total .	...	7,971	...	58	...	555	...	125	...	8,709	
GRAND TOTAL .	...	8,226	...	227	...	666	...	140	...	9,259	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

FORM No. 59.

Account of Timber and other Produce cut or collected by Government Agency and brought to depôts, sold locally, or otherwise disposed of, during the year 1903-04.

Name of Division.	Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
		Padouk.			
	91,685	3,51,177	4,42,862	317,854	125,008
		Koko.			
	4,341	8,165	12,506	8,866	3,640
		Chuglam Black.			
	9,128	16,911	26,039	17,479	8,560
Andamans. . . .		*Chuglam White.*			
	28,757	25,037	53,794	25,662	18,132
		Marble wood.			
	545	445	990	834	156
		Satin wood.			
	112	101	213	92	121
Total . .	1,34,568	4,01,836	5,36,404	3,80,787	1,55,617

FORM No. 59—*continued.*

Account of Timber and other Produce cut or collected by Government Agency and brought to depôts, sold locally, or otherwise disposed of, during the year 1903-04—continued.

Name of Division.	Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
Andamans	60,754	1,59,490	*Other timber* (cubic feet). 2,20,244	1,54,132	66,112
	38,850	11,04,206	*Firewood* (cubic feet). 11,43,056	10,85,218	57,838

FORM No. 60A.—[*Prescribed*].

Abstract showing the value of Timber and other Produce at sale depôts for the year 1903-04.

Description of Timber and other produce,	On hand at commencement of the year.			On hand at close of the year.			Differences in Value.		Remarks.	
	No.	c. ft.	Value.	No.	c. ft.	Value.	In favour of the year.	Against the year.		
1	2	3	4	5	6	7	8	9	10	
			Rs.			Rs.	Rs.	Rs.		Rs.
Logs	4,671	1,83,036	2,38,005	4,257	1,88,261	1,30,605	...	1,07,400	Against.	1,07,400
Planks	...	12,286	14,035	...	33,468	39,698	25,663	...	For	26,856
Firewood	...	38,850	1,471	...	57,838	2,664	1,193	...	Against.	80,544
Total	4,671	2,34,172	2,53,511	4,257	2,79,567	1,72,967	26,856	1,07,400		

FORM No. 60B—[*Prescribed*].

Abstract showing the value of Live and Dead Stock for the year 1903-04.

Description of Live and Dead Stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in value.		Remarks.	
	No.	Value.	No.	Value.	In favour of the year.	Against the year.		
1	2	3	4	5	6	7	8	
		Rs.		Rs.	Rs.	Rs.		Rs.
Elephants	41	71,992	39	56,057	...	15,935	One elephant, *Malatoo*, belonging to the Settlement, but used by Forest Department, not included in the list.	
							Two elephants died during the year.	
Buffaloes	20	413	32	661	248	...	Fifteen buffaloes were purchased.	
							Three buffaloes died during the year.	
Boats, timber towing	20	10,694	23	13,079	2,385	...	Three new timber boats built.	
Lighters	2	2,924	2	2,662	...	262		
Carts, small	2	44	2	37	...	7		
Crane	1	355	1	285	...	50		
Portable tramway	19¾ miles, 1 locomotive, 67 trucks, 5 trollies.	1,22,909	22¾ miles 1 locomotive, 87 trucks. 5 trollies.	1,36,252	13,343	...	Three miles portable tramway was purchased.	
Office furniture	...	361	...	343	...	18		
Miscellaneous stores, Axes, dahs, winches, etc., etc.	...	4,459	...	12,622	8,163	...		
								Rs.
Dingy	2	137	2	133	...	4	For	27,970
							Against	16,276
Forester's boat	1	112	1	131	19	...	For	11,694
Steam launch *Eileen*	1	12,095	1	15,731	3,636	...		
Jolly boats	3	574	3	597	23	...		
Buildings	...	5,500	...	5,653	153	...	At Wimberley Gunj and Aukhet.	
Total	...	2,32,549	..	2,44,243	27,970	16,276		

FORM No. 61—[*Prescribed*].

Summary of Revenue of the Andamans Division during the Forest year 1903-04.

REVENUE.

	Rs.	A.	P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
a. Timber	4,29,173	0	0
b. Firewood and charcoal	40,326	0	0
c. Bamboos	3	0	0
d. Sandal wood	...		
e. Grass and other minor produce	6,109	0	0
TOTAL I	4,75,611	0	0
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—			
a. Timber	1,082	0	0
b. Firewood and charcoal	16	0	0
c. Bamboos	18	0	0
d. Grazing and fodder grass	...		
e. Other minor produce	471	0	0
f. Forest stamps	...		
g. Other items	...		
h. Commutation fees	...		
TOTAL II	1,587	0	0
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE—	...		
TOTAL III	...		
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forest	...		
TOTAL IV	...		
V.—MISCELLANEOUS—			
a. Fines and forfeitures	23	0	0
b. Refunds	243	0	0
c. Other sources	430	0	0
TOTAL V	696	0	0
GRAND TOTAL REVENUE	4,77,894	0	0

FORM No. 61—[*Prescribed*].

Summary of Expenditure of the Andamans Division during the Forest year 1903-04.

EXPENDITURE.

A.—CONSERVANCY AND WORKS.

	Rs.	A.	P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
a. Timber	1,71,480	0	0
b. Firewood and charcoal	17,387	0	0
c. Bamboos	...		
d. Sandalwood	...		
e. Grass and other minor produce	4,472	0	0
TOTAL A-I	1,93,339	0	0
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS	...		
TOTAL A-II	...		
III.—DRIFT AND WAIF WOOD AND CONFISCATED FORESTS PRODUCE	...		
TOTAL A-III	...		

EXPENDITURE—*contd.*

A.—CONSERVANCY AND WORKS—*contd.*	Rs.	A.	P.
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forests	...		
TOTAL A-IV	...		
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT	...		
TOTAL A-V	...		
VI.—LIVE STOCK, STORES, TOOLS AND PLANT—			
a. Purchase of cattle	440	0	0
b. Feed and keep of cattle	19,624	0	0
c. Purchase of stores, tools and plant	13,408	0	0
TOTAL A-VI	33,472	0	0
VII.—COMMUNICATIONS AND BUILDINGS—			
a. Roads and bridges	27,827	0	0
b. Buildings	1,516	0	0
c. Other works	...		
TOTAL A-VII	29,343	0	0
VIII.—ORGANIZATION, IMPROVEMENT AND EXTENSION OF FORESTS—			
a. Demarcation	...		
b. Cost of Settlements; compensation for land and rights	...		
c. Surveys	...		
d. Working-plans	593	0	0
e. Sowing and planting	2,646	0	0
f. Protection from fire	...		
g. Other works	...		
TOTAL A-VIII	3,239	0	0
IX.—MISCELLANEOUS—			
a. Law charges	...		
b. Other charges	452	0	0
TOTAL A-IX	452	0	0
TOTAL A.—CONSERVANCY AND WORKS	2,59,845	0	0

B.—ESTABLISHMENTS.

I.—SALARIES—			
a. Conservators	...		
b. Superior officers	16,397	0	0
c. Subordinate forest and depôt establishments	4,499	0	0
d. Office establishments	2,323	0	0
e. Deputation and special allowances	1,200	0	0
f. Exchange compensation allowance	837	0	0
TOTAL B-I	25,346	0	0
II.—TRAVELLING ALLOWANCES—			
a. Conservators	...		
b. Superior officers	2,639	0	0
c. Subordinate forest and depôt establishments	411	0	0
d. Office estsblishments	...		
TOTAL B-II	3,050	0	0
III.—CONTINGENCIES—			
a. Stationery	71	0	0
b. Carriage of tents and records	...		
c. Rents, rates and taxes	...		
d. Pay of police guards	...		
e. Official postage	170	0	0
f. Sundries	668	0	0
TOTAL B-III	909	0	0
TOTAL B.—ESTABLISHMENTS	29,305	0	0
GRAND TOTAL OF EXPENDITURE	2,89,150	0	0
SURPLUS	1,88,744	0	0

T. H. WORGAN.
Assistant Comptroller General (Forests).

CALCUTTA;
The 25th August 1904.

FORM No. 62—[*Prescribed*].

Account Current for the Forest year 1903-04.

RECEIPTS.	Rs. A. P.	Rs. A. P.	PAYMENTS.	Rs. A. P.	Rs. A. P.
Cash Balance	...	228 4 5	I.—Refunds and Drawbacks	...	34 4 9
VIII.—Assessed taxes—			Expenditure as per Annual Summary, Form No. 61.	...	2,89,150 5 1
Income Tax—Deductions from salaries.	...	408 9 2	Forest Deposits	...	...
Revenue as per Annual Summary, Form No. 61.	...	4,77,893 14 11	Forest Advances	...	241 3 5
XII.—Interest	...	...	Suspense Account	...	...
Forest Deposits	...	...			
Forest Advances	...	239 2 11	Savings Bank Deposits—		
Suspense Account	...	...	Bank Account—		
			Forest Officers' Provident Fund	...	...
Service Funds—					
Uncovenanted Service Family Pension Fund, Bengal.	...	...	Cash Remittances—Local—Forest Remittances—		
			Remittances to Treasuries	2,35,881 10 4	
Savings Bank Deposits—			Unpaid cheques written back	...	
			Inter-divisional Transfers	...	
Bank Account—					2,85,881 10 4
Forest Officers' Provident Fund	1,528 0 0				
			Account Current with Foreign States—		
Special Account—			Berar Suspense Account	...	
General Family Pension Fund	420 0 0		His Majesty's Colonial Government, Ceylon.	...	
		1,948 0 0			...
Cash Remittances—Local—Forest Remittances—			Exchange Account with other Governments—		
Forest cheques drawn	1,23,127 5 0				
Revenue Remittances written back	...		Account between India and Burma—		
Inter-divisional Transfers	...		I.—Forest Remittances to India from Burma (written back).	1,374 3 0	
		1,23,127 5 0	—Items adjustable by—	...	
			II.—Forest Remittances from India to Burma.	422 2 7	
Account Current with Foreign States—			IV.—Items adjustable by Burma	360 0 0	
Berar Suspense Account	...				
His Majesty's Colonial Government, Ceylon.	...		Account between India and Bengal—		
		...	—Forest Remittances from—to—	...	
			IV.—Items adjustable by Bengal	1,162 1 10	
Exchange Account with other Governments.	...		Account between—and—		
			—Forest Remittances from—to—	...	
Account between India and Burma—					
I.—Forest Remittances to India from Burma.	63 12 0		Account between—and—		
—Items adjustable by—	...		—Forest Remittances from—to—	...	
Account between—and—			Account between—and—		
—Forest Remitances to—from—	..		—Forest Remittances from—to—	...	
—Items adjustable by—	...				
			Account between—and—		
Account between—and—			—Forest Remittances from—to—	...	
—Forest Remittances to—from—	...				
—Items adjustable by—	...		Account between—and—		
			—Forest Remittances from—to—	...	
Account between—and—			—Items adjustable by—	...	
—Forest Remittances to—from—	...				
			Account between—and—		
Account between—and—			—Forest Remittances from—to—	...	
—Forest Remittances to—from—	...		—Items adjustable by—	...	
					3,318 7 5
Account between—and—					
—Forest Remittances to—from—	...		Inter Departmental Transfers—		
			P. W. Department, Ordinary Branches	...	
Account between—and—			,, ,, Railway Branch	...	
—Forest Remittances to—from—	...		Military Department, Bengal Command.	...	
—Items adjustable by—	...		,, ,, Punjab ,,	...	
			,, ,, Madras ,,	...	
Account between—and—			,, ,, Bombay ,,	...	
—Forest Remittances to—from—	...		Telegraph Department	...	
—Items adjustable by—	...		Post Office ,,	...	
		63 12 0	Marine ,,	3,316 4 8	
			Civil Departments	1,29,586 8 11	
Inter-Departmental Transfers—					1,32,902 13 7
P. W. Department, Ordinary Branches	24,674 7 2				
,, ,, Railway Branch	...				
Military Department, Bengal Command.	103 12 1				
,, ,, Punjab ,,	...				
,, ,, Madras ,,	...				
,, ,, Bombay ,,	...				
Telegraph Department	...		Cash Balance	...	...
Post Office ,,	...				
Marine ,,	4,923 4 1				
Civil Departments	77,913 4 10				
		1,07,619 12 2			
GRAND TOTAL	...	7,11,528 12 7	GRAND TOTAL	...	7,11,528 12 7

T. H. WORGAN,
Assistant Comptroller General (Forests).

CALCUTTA;
The 25th August 1904.

FORM No. 63—[*Prescribed*].

Revenue received and outstandings on account of Revenue during 1903-04.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Andamans	Timber, Firewood and Gorjan oil, etc.	23,439 7 1	4,89,313 10 3	5,12,753 1 4	4,75,735 3 5*	37,017 13 11	* Rs. 124-7-8 written off.
	Other revenue	...	2,283 3 2	2,283 3 2	2,283 3 2	...	
	Total .	23,439 7 1	4,91,596 13 5	5,15,036 4 6	4,78,018 6 7	37,017 13 11	

B. B. OSMASTON,
Deputy Conservator of Forests, Andamans.

Calcutta;
The 30th September 1904.

FORM No. 64—[*Prescribed*].

Outstandings and liabilities on account of contractors and disbursers for the Forest year 1903-04.

Division.	Department Debtor.			Department Creditor.			Balance due.	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Andamans .	.	239 2 11	239 2 11	1 11 0	241 3 5	242 14 5	3 11 6	...
Total .	...	239 2 11	239 2 11	1 11 0	241 3 5	242 14 5	3 11 6	...

T. H. WORGAN,
Assistant Comptroller General (Forests).

Calcutta;
The 25th August 1904.

FORM No. 65—[*Prescribed*].

Financial results of the year 1903-04.

Division.	Timber and other produce removed from the forests by Government Agency.		Other revenue.		Formation, protection and improvement of forests.	Total.	
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Andamans .	4,75,611	2,78,133	2,283	916	10,101	4,77,894	2,89,150
Total .	4,75,611	2,78,133	2,283	916	10,101	4,77,894	2,89,150

B. B. OSMASTON,
Deputy Conservator of Forests, Andamans.

Port Blair;
The 30th September 1904.

G. I. C. P. O.—No. 2926 R & A.—9 1-1905.—180—R N. D.

9857

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1904-05.

ALLAHABAD.

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS, UNITED PROVINCES.

Price Eight Annas or 9d.

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No. 1930, dated Port Blair, the 29th September 1905.

From—W. R. H. MERK, ESQ., I.C.S., C.S.I., Chief Commissioner, Andaman and Nicobar Islands and Superintendent of Port Blair.

To—The Secretary to the Government of India, DEPARTMENT OF REVENUE AND AGRICULTURE, SIMLA.

SIR,—I have the honour to submit, in original, letter No. 954, dated the 19th instant, from the Deputy Conservator of Forests, Port Blair, being his Annual Report for the year 1904-05 with forms and appendices.

2. The most important forest operation undertaken during the year was the exploration of the North Andaman group of islands by Mr. Todd. Mr. Rogers' report of the exploration, undertaken by him partly last year and partly during this year, of Rutland and the Archipelago is awaited.

3. Four hundred and ninety-three thousand and one cubic feet of timber against 452,622 cubic feet last year was extracted during the year, the cost of extraction per ton being Rs. 13-2-4 as against Rs. 12-13-0 last year. This increase in cost of extraction is stated to be nominal as very little timber was brought in from the forests in the latter portion of the year, owing to the congested state of the Haddo depôt, where a number of logs of previous years had accumulated, which had to be cleared. In future the stock at the depôt will be kept as low as possible.

4. The Wimberley Ganj Steam Tramway is approaching completion. In addition 19½ miles of temporary tram-lines have to be maintained. The total expenditure on tramways was Rs. 17,723 or Rs. 10,104 less than last year. The steam timber boat "Rosamond" will soon be launched and will greatly facilitate the transport of logs. The total daily average of the labouring gangs including those employed on the Chatham Saw Mill was 1,527 against 1,251 last year, and the daily average number of elephants employed was 29 compared with 27 last year.

5. An annual plan of operations for the current year has been sanctioned and is in process of being carried out.

6. There remain 7,475 tons of padouk timber to be supplied before the 31st December 1906 to complete the three years' contract entered into with Messrs. Gillanders, Arbuthnot & Co. The Deputy Conservator of Forests anticipates that this ought to be easily done especially with the aid of the "Rosamond."

7. The para rubber plantation is being extended, and the existing trees have done well.

8. Arrangements will shortly be made for the removal of the charge of the Chatham Saw Mill from the Forest Department. It has been temporarily transferred to an Extra Assistant Conservator leaving the Deputy Conservator free for the better supervision of his Department.

9. The financial results in Chapter III of the Report are satisfactory. Mr. Osmaston assumed charge of the Division on the 27th July 1904 from Mr. Rogers. Mr. Osmaston reports favourably on both the executive and clerical staffs of the Department. He is himself an excellent officer and good business man, and is thoroughly versed with the local system and conditions.

No. 954, dated Port Blair, the 19th September 1905.

From—B. B. OSMASTON, ESQ., F.C.H., Deputy Conservator of Forests, Andamans.

To—The Chief Commissioner, Andaman and Nicobar and Superintendent of Port Blair.

SIR,—I have the honour to forward herewith the Annual Progress Report of Forest Administration in the Andamans for 1904-05.

No. 397 F. of 1906, dated Simla, the 21st April 1906.

From—J. WILSON, Esq., C.S.I., I.C.S., Secretary to the Government of India,
DEPARTMENT OF REVENUE AND AGRICULTURE,

To—The Superintendent of Port Blair.

I AM directed to acknowledge the receipt of your letter No. 1930, dated 29th September 1905, forwarding the Forest Administration Report of the Andamans for 1904-05.

2. The Government of India observe with satisfaction that the outturn of timber from the forests of the Andamans continues to increase, and trust that the extraction of the yield of the over-mature trees, with which these areas appear to be largely stocked, will be pushed forward with vigour now that the construction of the steam tramway and timber-boat is approaching completion and more elephants are being purchased for forest work. They agree that the accumulation of stocks in depôt should, as far as possible, be avoided.

3. The success of the "taungya" method of rearing padouk does not appear to have been definitely proved, and the results of future experiments will be looked forward to with interest, as the subject appears to be of considerable importance. The difficulty and expense of extracting the latex appears to be prohibitive to the collection of rubber from the indigenous climber, but attention has been given to the raising of exotic rubber trees, and amongst these the *Ficus elastica* would perhaps repay experiment.

4. The importance of the exploration of the North Andaman Island, which was commenced on your initiative and carried out under your supervision, is fully appreciated by the Government of India, who recognize that the satisfactory results of the working of the past year are largely due to the interest you have taken in the Forest administration.

No. 398 F.

Copy, with a copy of the report, forwarded to the Home Department, for information.

G. I. C. P. O.—No. 76 R. & A.—17-6-1906.—142—J. A.

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1904-05.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

I.—ALTERATION OF AREAS.

1. There has been no alteration in the area of the Reserved Forests.

Thirty seven acres of Unclassed Forests have been brought under cultivation during the year.

II.—FOREST SETTLEMENTS.

2. None undertaken or required.

III.—DEMARCATION.

3. No boundary lines were cleared, as it was considered unnecessary.

IV.—FOREST SURVEYS.

4. None carried out.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—REGULATION OF MANAGEMENT.

(*a*) *Working-plans and their control.*

5. No working-plan has as yet been made for the forest in the Andamans.

(*b*) *Preliminary Working-plan Reports.*

6. The North Andaman Island, including Interview Island and the other more important adjacent Islands, was explored from December to February inclusive, by Mr. F. H. Todd, Deputy Conservator of Forests, accompanied by Mr. G. Tipper of the Geological Survey Department, and a report upon the Forest growing stock with proposals for working the same has been submitted to Government for their orders.

Mr. C. G. Rogers' report upon the results of his exploration of the South and Middle Andamans is still awaited.

The only forest areas of any importance which are still unexplored are the central and northern portions of the Middle Andaman and the Little Andaman Island.

The cost of the exploration of the North Andaman Island amounted to Rs. 4,803.

(*c*) *Plans of operations.*

7. The provisions of the plan of operations were, with certain unimportant exceptions, duly carried out.

II.—Communications and Buildings.

(*a*) *Roads and bridges.*

Wimberley Ganj Steam Tramway.

8. The whole of the earthwork, bridges and culverts have now been completed as far as the Kalatang terminus, and the permanent way has been laid from Kadakachang terminus to Wimberley Ganj, a distance of two miles, and the locomotive has been working regularly over this section for some months.

9. The work done upon this tramway in the year under report has been exceedingly heavy, including over 2,000,000 cubic feet earthwork in cuttings and embankment, and the construction of 22 masonry bridges and culverts four of which are of large dimensions, as well as 500 running feet of retaining walls.

10. All that now remains is to lay the rails as far as the Kalatang terminus, which will be completed next year.

Temporary Tram Lines.

11. About 3½ miles of tram line was taken up and relaid for fuel export from the Namuna Ghar and Bindraban forests as follows:—

	Miles.
Namuna Ghar	2½
Bindraban	1

12. Nearly one mile of temporary line was also laid along the portion of the alignment of the permanent steam tramway under construction to facilitate the carriage of bricks, stone and mortar required for the bridges, culverts and breast walls, and for the moving of earth required for the embankments.

13. The length of temporary tram lines in use at the end of the year was 19½ miles as follows:—

	Miles.
Wimberley Ganj timber tramway	3½
Anikhet line	9
Bindraban fuel line	1½
Namuna Ghar fuel line	5½
	19½

14. The expenditure incurred on tramways compares as follows with that of last year :—

	1903-04.	1904-05.	Decrease.
	Rs.	Rs.	Rs.
New work	27,665	17,563	10,102
Maintenance	162	160	2
Total	27,827	17,723	10,104

(*b*) *Buildings.*

PERMANENT.

15. Wooden quarters, with cook-house attached, were constructed for the Elephant Jamadàr, and a stable and cook-house for the Range Officer at Wimberley Ganj.

The large permanent barrack commenced last year at Wimberley Ganj was completed.

TEMPORARY.

16. Five barracks were built for the accommodation of convicts at the following camps :—

Lakarabaraj	One.
Rogolochang	Two.
Goplakabang	One.
Rangachang	One.

17. A police guard house and kitchen were also built at Rogolochang, and four cook-houses for convicts were constructed at Wimberley Ganj and Goplakabang.

Lastly, two small rest huts were built at the two extraction camps on Baratang Island.

BUILDINGS REPAIRED.

18. Twenty four permanent and temporary buildings including 15 barracks were thoroughly repaired, and the roofs of ten were also earth oiled and painted.

19. The expenditure under this head compares as follows with the similar figures last year :—

	1903-04.	1904-05.	Increase.
	Rs.	Rs.	Rs.
New work	1,065	1,434	369
Repairs	451	1,200	749
Total	1,516	2,634	1,118

III.—Protection of Forests.

(a) *General protection.*

20. No cases were taken into court this year.

This was owing to the adoption of a new system of issuing passes for the removal of minor forest produce, which resulted in preventing offences.

(b) *Protection from fire.*

21. No special precautions were necessary to prevent fires although the year under report was a most exceptionally dry one.

22. In the dry deciduous unclassed forests of the North Andaman, however, fires were observed early in May.

These were caused by the Andamanese and probably did some damage to fallen padouk logs.

The Andamanese have always been in the habit of keeping fire burning in fallen tree trunks, and this fire is of course liable to spread in dry years, when much damage to fallen logs is bound to result.

23. These old seasoned logs usually contain wood of the very finest colour, and it would seem worth while to bring a little mild pressure or persuasion to bear upon the Andamanese to prevent their carelessness in leaving fire lying about in the dry months, which is liable to cause such serious damage to Government property.

(c) *Protection from cattle.*

24. The reserved forests are all closed to grazing with the exception of a small patch of 26 acres near Navy Bay, which is no longer worth protecting.

(d) *Protection against injuries from natural causes.*

25. Last year the Haddo depôt was full of timber, aggregating altogether some 3,400 logs, of which many had been lying there for several years, and a very large percentage were more or less badly bored by the marine worm.

26. A clearance has now been effected, and on the lst July 1905 the depôt was found to contain 746 logs only, the most unsound having been removed and cut up into timber and fuel.

In future the stock will be kept as low as possible so as to minimize the damage done by the Teredo.

IV.—Sylviculture.

(a) *Natural reproduction.*

27. Natural reproduction of padouk in natural forest is extremely rare: wherever, however, a complete clearance is made and fresh soil exposed near a seed-bearing tree, a dense crop of seedlings usually results, showing that all that this tree requires to ensure successful germination and reproduction is light and absence of competition from shade-bearing weeds and creepers.

(b) *Artificial reproduction.*

(i) Regular Plantations.

28. Three hundred and forty thousand mangrove seedlings were planted 4′ × 4′ on an area of 125¼ acres of swamp; of this 66¾ acres was new work and 58½ acres filling up vacancies or failures in previous years' plantations.

As a rule, provided suitable areas are selected, there are no failures in mangrove planting; but in certain areas planted in past years a great number of the seedlings were destroyed by crabs, and these have now been replaced.

(ii) TAUNGYA PLANTATION.

29. One hundred and two acres of secondary growth forest was cleared of jungle near Bindraban, and after burning, was sown at stake 6′ × 6′ with padouk seed.

30. The clearing was done between the 21st December and 20th February, and it was intended to leave the cut material until, at least, the middle of March before attempting to burn it, thus ensuring complete combustion. Unfortunately it was prematurely set alight and burnt on the 22nd February, and the burning was consequently only partially complete.

31. Sowing commenced on the 31st March and was completed by the 6th May.

32. The year was an exceptionally dry one, no rain falling until the 14th May.

33. The seed began to germinate in the beginning of June and by the end of that month the majority had attained a few inches in height. It is too early at present to judge of the success of the sowings.

(*c*) *Operations for the improvement of the growing stock.*

34. None undertaken.

(*d*) *Experiments.*

35. Three men have been employed for about eight months in extracting the latex and preparing rubber from the indigenous rubber-yielding creeper.

This creeper is common and widely distributed in the Andamans, but it never attains large dimensions, about six to eight inches in girth being the maximum, and most of it is very much smaller.

36. No cheap method of tapping the latex has been discovered and the present system of cutting the stem up into short sections, which are drained of their contents is not only laborious and costly, but it destroys the creeper itself.

It was found that by the above method a man could collect about a pound of rubber in 11 days, so that the cost of collection works out at about Rs. 220 per maund, which is prohibitive.

37. The resulting rubber was well reported on by the Reporter on Economic Products, so that it is unfortunate that no cheap method of extraction is forthcoming.

38. Fruiting botanical specimens of this creeper have been forwarded to the Superintendent, Royal Botanic Gardens, Calcutta, where the plant has been identified as *Parameria glandulifera, Benth.*

Para Rubber.

39. A few trees of the Para rubber (*Hevea braziliensis*), which were introduced into Port Blair some 18 years ago having resulted in a number of natural seedlings, 200 of these seedlings have been dug up and planted 20′×20′ near Namuna Ghar on an area of about an acre.

40. Arrangements have also been made to import fresh seed to give the plant a more extended trial, as the existing trees have done well and the climate appears to suit them.

V.—Exploitation.

(*a*) *System of Management.*

(i) Major Forest Produce.

41. Mature trees of the more valuable species, including padouk (*Pterocarpus dalbergioides*), koko (*Albizzia lebek*), pyinma (*Lagerstræmia hypoleuca*) and others, are felled wherever they are found in the vicinity of the extraction camps, which gradually pass over the whole area of the Forest.

42. Fuel fellings are restricted to the neighbourhood of Port Blair and consist in making what is practically a coppice felling, standards of gurjan and other valuable trees which may happen to be standing upon the area being retained as seed-bearers.

43. The felling of trees within a foot of the ground is now insisted on, whereas in former years it was the practise to fell at any convenient height, and often as high as 10 feet from the ground, resulting in a most undesirable pollard condition.

(ii) Minor Forest Produce.

44. Bamboos, canes and thatching leaves (chiefly *Licuala peltata*) are cut both departmentally and by purchasers on permit.

As the forests abound everywhere with such produce, no restrictions as to method of cutting are imposed or required.

45. Gurjan (*Dipterocarpus sp.*) of two kinds are tapped for oil.

Operations are carried on only in the dry season, January to April.

The whole of this oil is used locally, in conjunction with earth-oil, for painting.

46. Mangrove bark was collected, as usual, for local requirements only. The damage done to the mangrove forests worked for bark is repaired naturally.

(*b*) *Agency of Exploitation.*

(1) Departmental Agency.

47. Nearly the whole of the timber and fuel removed from these forests is extracted by Departmental Agency.

(*a*) *Timber.*

48. Logs are brought in to Port Blair either directly in rafts, or by rafting combined with carriage over the two existing tramways.

49. Improvement in the method of securing the logs in rafting has enabled rafts of 180 logs to be brought in to Port Blair in fine weather.

The majority of the logs have now to be towed for a distance of 35 miles by sea, and the average distance of water transport is over 20 miles.

No logs were lost in transit by sea.

50. The steam timber boat "Rosamond" is still under construction, but nearly all her heavy work has been completed, and it is hoped she will be launched by January 1906.

51. Form No. 65 shows that the total expenditure on timber and other produce removed from the forests by Government Agency amounted in the year under report to Rs. 3,35,113.

52. In order to obtain the local cost of extraction of timber the following sums must be deducted from the above amount :—

		Rs.
A.-I *a.*	Freight and other charges in connection with export of timber after leaving Port Blair .	58,114
	Cost of conversion of timber in the Chatham Saw Mills	21,316
	Miscellaneous	4,896
A.-I *b.*	Fuel extraction	15,645
A. I *e.*	Collection of gurjan oil	3,494
A.-VI *a.*	Purchase price of three elephants not used for dragging heavy timber during the year . .	12,000
A.-VI. *c.*	Purchase of stores not connected with timber extraction	63,509
A.-VII *a.*	Permanent steam tramway	17,563
A.-VII *b.*	Construction of permanent buildings . . .	2,000
A-VIII *d.*	Exploitation	1,467
A.-VIII *e.*	Plantations	2,289
A.-IX *b.*	Miscellaneous	4,103
B.	Pay and allowances of a Deputy Conservator of Forests lent for four months for exploration duty	3,336
	Pay and allowances for 2½ months of a Deputy Conservator of Forests on special duty, in connection with exploration and saw mills .	2,125
	One-sixth of cost of supervision, establishment, &c., for fuel work	5,427
	Total . .	2,17,284
	This leaves chargeable to local extraction of timber	1,17,829
To this must be added—		
(1)	Interest at 5 per cent. for one year on Rs. 56,057, the value of 39 elephants, at the beginning of the year .	2,803
(2)	Depreciation for one year on the same 39 elephants at 10 per cent.	5,606
(3)	Depreciated value of "Khanum" who died on 4th October 1904	3,393
	Total . .	1,29,631

53. The total volume of timber extracted during the year under report was 493,001 cubic feet according to Form No. 57, and thus the rate of extraction per ton of 50 cubic feet works out at Rs. 13-2-4 as against Rs. 12-13-0 last year.

This increase in cost is, however, only apparent, and is owing to the fact that in order to clear the Haddo depôt very little timber was brought in from the forest in the latter portion of the year, as explained above in paragraph 26.

(*b*) *Fuel.*

54. The quantity of fuel removed during the year was 9,021 cords, which realized Rs. 34,836, as against 12,620 cords and Rs. 42,960 in 1903-04.

(*c*) *Minor produce.*

55. Gurjan oil was collected from 23rd January to the end of June, the locality worked being the same as in previous year.

The amount of oil collected was 12,831 gallons, value Rs. 6,415, as compared with 12,650 gallons, value Rs. 7,830, in 1903-04.

56. One thousand maunds of mangrove bark were collected and supplied to the Settlement on a royalty of Rs. 250, as against 1,182 maunds collected last year.

The quantity of gurjan oil and mangrove bark collected depends entirely upon local requirements.

(ii) PURCHASERS.

(*a*) *Timber.*

57. Six hundered and fifty-three tons of timber were removed by purchasers, as against 343 tons in 1903-04; of this quantity 309 tons came from reserved, and 344 tons from unclassed forests.

Practically the whole of this timber belonged to class III and consisted chiefly of gurjan.

(*b*) *Fuel.*

58. The quantity of fuel removed by purchasers during 1904-05 was five cords against 24 cords in the previous year.

(*c*) *Minor produce.*

59. Bamboos, canes and thatching leaves were removed from Government forest to the value of Rs. 546 against Rs. 227 last year.

(iii) RIGHTS AND PRIVILEGES.

60. None recognised.

(iv) FREE GRANTS.

61. The usual free grants of poles of inferior species and minor forest produce were made to the Settlement and to free residents and self-supporters for the repairs of their houses.

The value of these free grants amounted to Rs. 7,828 in the case of the former and to Rs. 9,294 in the latter, as compared with Rs. 26,969 and Rs. 18,614 last year.

62. The amount of forest produce granted free during the year under report would appear from these figures to be much less than in previous years. This is not, however, the case, and the difference is solely due to the use of different and more accurate figures in calculating the value of such produce.

Further details of the forest produce granted free are given in Forms Nos. 57 and 58.

(d) *Outturn and sources of forest produce.*

63. The following table compiled from Forms Nos. 57 and 58, gives the outturn of the Reserved and Unclassed forests according to the agency of exploitation, and compares the name with the similar figures for 1903-04 :—

Agency of exploitation.	Reserved forests.		Protected forests.		Unclassed forests.		Total.	
	1904-05.	1903-04.	1904-05.	1903-04.	1904-05.	1903-04.	1904-05.	1903-04.
1	2	3	4	5	6	7	8	9
	C. ft. solid.	C. ft. solid.	C. ft. solid.	C. ft. solid.	C. ft. solid.	C. ft. solid.	C. ft. solid.	C. ft. solid.
Government . .	265,374	272,941	...	...	227,627	179,681	493,001	452,622
Purchasers . .	15,431	7,023	...	...	17,212	11,625	32,643	18,648
Free grantees . .	9,425	...	...	...	18,850	27,510	28,275	27,510
District Officers . .	49,530	2,556	...	...	64,286	57,335	113,816	59,891
Total .	339,760	282,520	...	...	327,975	276,151	667,735	558,671
Difference in favour of 1904-05	57,240	...	...	...	51,824	...	109,064	...

64. The increase in the outturn from reserved forests is due partly to an increased demand for gurjan timber and partly to a large number of new convict barracks having been constructed by the officers of the Settlement.

65. The increase in the outturn from unclassed forests is due to the extraction of more padouk in satisfaction of the new log contract.

The above outturn is made up of timber and poles as follows, the figures for the year under report being compared with those of the previous year :—

Nature of produce.	1904-05. Cubic feet solid.					1903-04. Cubic feet solid.				
	Government.	Purchasers.	Free grantees.	Settlement Officers.	Total.	Government.	Purchasers.	Free grantees.	Settlement Officers.	Total.
Timber .	489,356	32,643	...	...	5,21,999	447,747	17,148	...	...	464,895
Poles .	3,645	...	28,275	113,816	145,736	4,875	1,500	27,510	59,891	93,776
Total .	493,001	32,643	28,275	113,816	667,735	452,622	18,648	27,510	59,891	558,671

66. This shows that there has been a substantial increase in the year under report, under all heads except poles removed by Government and purchasers.

67. The number of trees felled during the year compares as follows with last year figures :—

Year.	Number of trees felled.		
	Padouk.	Others.	Total.
1904-05	3,814	1,949	5,763
1903-04	3,712	1,677	5,389
Difference in favour of 1904-05	+ 102	+ 272	+ 374

The above differences are small and require no comment.

68. The volume of timber extracted in the log as compared with last year's figures is as follows :—

Year.	Volume of timber in log.		
	C. ft. solid.		Tons.
1904-05	493,001	=	9,860
1903-04	452,622	=	9,052
Difference in favour of 1904-05	+ 40,379	=	+ 808

The large quantity of timber exploited was solely in the shape of padouk logs for export.

69. The average number of elephants at work daily throughout the year was 29 as against 27 in 1903-04.

From this it will be seen that each elephant has dragged out 1·1 tons of timber daily and that over an average distance of about one mile.

70. The three new elephants were only received in January, and for the remainder of the year were employed in dragging poles and light logs only, so as to break them in gradually to their full tasks.

71. The average daily number of convicts, including self-supporters, employed on timber extraction was 649, as compared with 546 in 1903-04.

72. The following statement shows the amount of timber in the log issued from the Haddo depôt during the year as compared with the similar figures during 1903-04 :—

	1904-05. Tons.	1903-04. Tons.
(1) *Local*—		
For Port Officer	148	197
For conversion in Chatham Saw Mills	6,715	5,289
(2) *Government Departments*—		
Royal Indian Marine	96	8
Public Works Department, Burma	...	2
Opium Department	23	...
Jails, Burma	26	...

	1904-05. Tons.	1903-05. Tons.
(3) *Private purchasers*—		
Gillanders, Arbuthnot & Co.	3,925	600
Binning & Co.	21	...
Turner, Morrison & Co.	33	8
C. D. Stewart & Co.	14	...
(4) *On commission sale*—		
Sample logs sent to Messrs. Shrank & Co., Glasgow	...	1
TOTAL	11,001	6,105

73. This large increase in the quantity of timber issued from the Haddo depôt is due partly to the disposal of unsound logs in the Chatham Saw Mill and partly to the large number of padouk logs for shipment to Calcutta under the new contract.

74. The 196,272 cubic feet or 3,925 tons of padouk logs supplied to Messrs. Gillanders, Arbuthnot & Co. was in part compliance with the three years' contract for 12,000 tons, commencing from the 1st January 1904.

On the 1st July 1905 half the time covered by the contract had expired and 4,525 tons of logs had been supplied.

This leaves 7,475 tons to be shipped before the 31st December 1906, which ought to be done without difficulty with the aid of the steam timber boat now approaching completion.

75. The Chatham Saw Mills were, as usual, in charge of the Deputy Conservator of Forests.

They worked for 296 days as follows :—

In working	296
Closed for repairs	11
Sundays and notified holidays	58
Total	365

76. Three new circular saws, one large and two small, have been added to the plant, and an efficient fire service has been purchased, which is capable of throwing a powerful jet of water upon any portion of the mills or their out-houses.

77. The daily average number of convicts employed at the mills was 182 as against 144 in the previous year.

78. A comparison of the amount of timber received in the log with the corresponding outturn in sawn timber compared with the similar figures for 1903-04 is given below :—

YEAR.	RECEIPTS OF TIMBER IN THE LOG.						OUTTURN SAWN TIMBER.			WASTE PERCENTAGE OF.		
	PADOUK.		OTHERS.		TOTAL.							
	Number of logs.	Volume c. ft.	Number of logs.	Volume c. ft.	Number of logs.	Volume c. ft.	Padouk. c. ft.	Other c. ft.	Total. c. ft.	Padouk.	Others.	Total.
1904-05 .	2,300	130,405	4,035	205,363	6,335	335,768	56,116	83,816	139,932	57	59	58
1903-04 .	2,804	146,548	2,579	117,896	5,383	264,444	78,751	62,467	141,218	46	47	46
Difference .	— 504	— 16,143	+ 1,456	× 87,467	+ 952	+ 71,324	— 22,636	+ 21,349	— 1,286	+ 11	+ 12	+ 12

79. The above figures show an apparently unsatisfactory rise in the percentage of wastage from 46 to 58 per cent. This is, however, entirely due to the clearing of the Haddo depôt of a vast accumulation of more or less worm-bored and rotten logs, which have now been all either converted into sawn timber or cut up into fuel.

80. The following table shows how the outturn of the Chatham Saw Mills was disposed of:—

To whom supplied.	Padouk. Tons.	Others. Tons.	Total. Tons.
The Settlement	536	705	1,241
The Forest Department chiefly for steam timber boat	423	217	640
Local public	45	78	123
Messrs. Gillanders, Arbuthnot & Co.	95	160	255
Jessop & Co.	...	129	129
Messrs. Turner Morrison & Co.	...	122	122
Messrs. Stewart & Co.	...	107	107
Master of the Mint	...	41	41
Superintendent, Alipore Jail	...	31	31
Executive Engineer, Maymyo	7	...	7
Principal, Sibpur College	18	13	31
Superintendent, Central Jail, Rangoon	1	3	4
TOTAL	1,125	1,606	2,731

81. No padouk squares were cut up for export, but only slabs and scantlings, all of which were sold, f. o. b. Port Blair to Messrs. Gillanders, Arbuthnot & Co.

REMOVAL OF PRODUCE BY PURCHASERS.

(*a*) *Timber.*

82. The volume of timber removed by purchasers was 653 tons as compared with 343 tons in 1803-04. All such timber is now sold in the log.

(*b*) *Fuel.*

83. The amount of fuel removed by the local inhabitants was 393 cubic feet as against 2,100 cubic feet last year.

(*c*) *Bamboos.*

84. 47,200 bamboos were removed by purchasers as compared with 36,000 in 1903-04.

(d) Minor Produce.

85. The following kinds of produce were removed during the year :—

Ordinary canes	No 73,600
Canes with roots	No. 40,000
Thatching leaves	Bdls. 62,56

The value of the above was Rs. 741 as against Rs. 471 last year.

86. The total expenditure incurred under management of State forests was Rs. 3,47,511, details of which will be found in Form No. 61.

CHAPTER III.

FINANCIAL RESULTS.

87. The revenue and expenditure for the year 1904-05 compares as under with those of the previous year :—

Year.	FINANCIAL YEAR.			FOREST YEAR.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1904-05	6,20,796	3,40,300	2,80,496	5,95,354	3,47,511	2,47,843
1903-04	4,32,381	2,66,124	1,66,257	4,77,894	2,89,150	1,88,744
Difference.	+1,88,415	+ 74,176	+ 1,14,239	+ 1,17,460	+ 58,361	+ 59,099

88. The percentage of the surplus to the gross receipts is 41 against 39 in the previous year, and the percentage of charges to gross receipts is 58 as compared with 61.

89. The principal differences under the budget sub-heads are as under :—

R-I *a*. *Timber removed by Government.*

The increase of Rs. 1,14,183 is almost entirely due to the increased export of padouk under the new timber contract.

R-I *b*. *Fuel removed by Government*

The decrease of Rs. 1,949 is due to less fuel having been purchased by the Settlement.

R-I *e*. *Grass and other minor produce.*

90. The increase of Rs. 1,705 is due to a large quantity of gurjan oil having been sold to the Settlement than in previous year.

A-I *a*.—The decrease of Rs. 32,073 is due to heavy timber being shipped to Calcutta instead of to London, the freight being proportionately reduced.

A-I *b*.—The decrease of Rs. 1,742 is due to less quantity of fuel extracted.

A-VI *a*.—The increase of the Rs. 13,060 is due to three elephants having been purchased. None were purchased last year.

A-VI *b*.—The expenditure on the feed and keep of elephants and buffaloes was Rs. 18,312 more than last year. This increase is due to three elephants having been purchased during the year, and also to the cost of grain having increased.

A-VI *c*.—The increase of Rs. 57,101 is due to the purchase of stores for the "Rosamond," and to the cost of the labour employed on her construction, as well as to the purchase of three miles of tramway material for the extraction of fuel.

A-VII *a*.—The cause of the decrease of Rs. 10,104 is solely owing to the fact that the three miles of tramway material purchased this year having been charged to A-VI *c*, which expenditure last year was charged under this sub-head.

A-IX *b*.—The increase of Rs. 7,759 is partly due to freight having been paid on three elephants and partly for freight paid on the stores for "Rosamond."

91. The following table compares the revenue and expenditure of the last five years :—

Years.	Financial year.			Forest year.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1903-04	4,32,381	2,66,124	1,66,257	4,77,894	2,88,150	1,88,744
1902-03	3,26,035	2,81,702	44,333	3,38,419	2,77,510	60,909
1901-02	2,66,903	1,96,038	70,865	2,57,136	2,11,950	45,186
1900-01	2,77,886	1,40,136	1,37,750	2,70,363	1,39,579	1,30,784
1899-1900	2,60,597	1,40,942	1,19,655	2,91,115	1,41,806	1,49,309
Average of five years ending 1903-04.	3,12,760	2,04,988	1,07,772	3,26,985	2,11,999	1,14,986

92. Analysis of income derived from major and minor forest produce, giving percentages of—

(*a*) major or minor produce as the case may be, and

(*b*) of the total revenue.

Head of service.	Revenue.	Percentage of major forest produce.	Percentage of total revenue.	Percentage of net income.
I. *a*	5,43,356	93·0	91·3	219·2
b	38,377	6·6	6·4	15·5
II. *a*	2,323	0·4	0·4	0·9
b	3	...	...	...
Total major forest produce	5,84,059	100·0	...	...
		Percentage of minor forest produce.		
I. *c*	...	...	...	...
e	7,814	90·7	1·3	3·2
II. *c*	59	00·7	0·1	...
e	741	8·6	0·1	0·3
Total minor forest produce	8,614	100·0	...	...
Other sources	2,681	...	0·4	1·1
Grand total revenue	5,95,354	...	100·0	240·2
Grand total expenditure	3,47,511	...	...	...
Net income	2,47,843	...	...	...

93. Analysis of expenditure under—

(*a*) exploitation, extension, constitution and improvement; and

(*b*) administration, executive and protective establishments with percentage of totals and grand total expenditure.

Head of service.	Expenditure in rupees.	Percentage of total under exploitation, extension, constitution and improvements.	Percentage of grand total expenditure.
A. I. Exploitation	1,58,546	52·1	45·6
VI Ditto	1,21,945	40·0	35·1
VII Ditto	20,357	6·7	5·8
VIII. Extension, constitution and improvement	3,756	1·2	1·1
Total exploitation, extension, constitution and improvement.	3,04,604	100·0	...
		Percentage of total under administrative, executive and protective.	
B. I *b*, *e* and *f* Administrative II *b*	26,300	75·8	7·6
B. I *c*, II *c*. Executive and protective	5,064	14·6	1·4
B. I *d*. Office	2,682	7·7	0·8
III. Contingencies	650	1·9	0·2
Total administrative, executive and protective	34,696	100·0	...
Other charges	8,211	...	2·4
GRAND TOTAL EXPENDITURE	3,47,511	...	100·0

94. The receipts and charges under the three heads of work are extracted from Form No. 65, and compared with similar figures of the last two years :—

	1904-05.		1903-04.		1902-03.	
	Surplus.	Deficit.	Surplus.	Deficit.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Departmental operations	2,54,434	...	1,97,478	...	68,153	...
Other revenue	4,789	...	1,367	...	988	...
Protection	...	11,380	...	10,101	...	8,232
TOTAL	2,47,843	...	1,88,744	...	60,909	...

95. The difference in the value of timber and other produce and of live and dead stock at the close of the year was as follows:—

	Timber, etc.	Live and dead stock.
	Rs.	Rs.
Value on 1st July 1904	1,72,967	2,44,243
Value on 30th June 1905	1,10,619	3,41,845
Difference	— 62,348	+ 97,602

96. The outstanding on account of revenue at the close of the year were Rs. 52,117 as compared with Rs. 37,018 in 1903-04.

97. The net results of the year's work shows a balance in favour of the year of Rs. 3,60,544 compared with Rs. 2,14,017, in the previous year, as shown below :—

	Rs.
Cash surplus	2,47,843
Add—	
Increased value of stock, Form No. 60-B.	97,602
Increase in outstandings of revenue	15,099
Total in favour of the year	3,60,544

CHAPTER IV.

ADMINISTRATION.

98. Mr. J. H. Lace, Conservator of Forests, Pegu Circle, inspected the division between the 21st April and 11th May 1905.

His report was submitted to the Chief Commissioner of the Andamans and Nicobars.

99. Mr. C. G. Rogers, Deputy Conservator of Forests, held charge of the division till the 27th July and Mr. B. B. Osmaston, Deputy Conservator of Forests, from that date to the end of the year.

100. Mr. F. H. Todd, Deputy Conservator of Forests, Burma, was deputed for 4½ months (30th November 1904 to 15th April 1904) to carry out an exploration of the forests of the North Andaman.

His report was submitted to the Chief Commissioner, Andamans and Nicobars.

101. Mr. G. T. Wrafter, Extra Assistant Conservator of Forests, 2nd grade, was attached to the division throughout the year. Owing to his local experience he was able to give the Divisional Officer much valuable assistance.

102. On the Executive staff Deputy Rangers Husain Ali and Mohan Lal deserve praise for the zeal and energy displayed in the discharge of their duties.

103. In the office, Khuda Bakhsh, Head Clerk, has as usual acquitted himself well, and Subhan Ali, 2nd Clerk and Durga Singh, 3rd Clerk, have given thorough satisfaction.

104. The following statement gives the average daily strength of the labour gangs on the various forest works in progress:—

	Present on work.	Sick in hospital.	Self-supporters.	TOTAL.
Timber extraction	511	109	138	758
Plantation and cultural operation	35	6	3	44
Wimberleyganj Steam Tramway construction	134	48	...	182
Steam timber boat "Rosamond" construction	35	5	76	116
Chatham Saw Mill	182	35	5	222
Firewood extraction	159	...	...	159
Gurjan oil collection	46	...	...	46
TOTAL	1,102	203	222	1,527

105. The average daily distribution of the timber extraction (including self-supporters), compared with last year is as follows :—

Work.	Details.	Strength of files. 1904-05.		1903-04.	
Supervising convicts, Munshis, barrack watchmen, etc., etc.	Jamadar	2		2	
	10 per cent. petty officers	71		45	
	1 per cent. Tindal	7½		4	
	2 per cent. Umedwars	14		9	
	Munshis, watermen, and ration mates	39	133	30	90
Transport of water	Constructing steam timber boat "Rosamond"	108		...	
	On steam launch "Eileen"	5		5	
	On steam cutter "Pigmy"	4		...	
	Building and repairing timber boats, etc.	10		15	
	Crew of timber boats and employed in timber depôts.	97		83	
	Rafting timber	28	252	15	118
Elephant establishment	In charge of elephants and buffaloes	136		122	
	Making elephant gear and repairing dragging paths.	36	172	32	154
Barrack construction	Building barracks, guard houses, etc.	30		18	
	Repairing barracks, guard houses, etc.	18	48	10	28
Tramway, etc.	Maintenance of 22¾ miles of tramway	36		16	
	Construction of temporary lines	37		20	
	Construction of Wimberley Gunj steam tramway lines.	118		63	
	Construction of Anikhet, Temple Ganj temporary tramway.	...		11	
	Constructing of channel from Port Meadows to Middle Strait.	...	191	2	112
Work of improvement	On exploration work	4		6	
	Plantations	35	39	30	36
Exploitation	Felling	42		34	
	Squaring	10		50	
	Trucking	45	97	41	125
	TOTAL		932		663

CHAPTER V.

GENERAL.

106. Three new and powerful tusker elephants were purchased during the year, and one "Khanum" died of debility, leaving 39 serviceable animals at work at the close of the year.

This is exclusive of two calves eight and five years old respectively.

107. Endeavours have been made both in Calcutta and Rangoon to obtain the services of a man of the Veterinary Assistant class as Elephant Doctor, but so far unfortunately no candidates have come forward.

108. No new buffaloes were purchased, and there were no casualties, so the stock of these animals remains at 32, as it was at the commencement of the year.

109. The steam-launch "Eileen" worked for 194 days in the year under report. It was found necessary to have her hauled up in March 1905 for thorough repairs, and her hull was then found to be in such a bad state that it has had to be practically renewed.

110. The steam-cutter "Pigmy" worked well and was of the greatest assistance to the Forest Officer on his inspections.

B. B. OSMASTON,
Deputy Conservator of Forests,
In-charge Andamans Division.

PORT BLAIR;
The 19th September 1905.

Appendix I.

Descriptive-roll of elephants in the Andamans Forest Division on the 30th June 1905.

Serial No.	Name of elephants.	Sex.	Height. Feet.	Height. Inches.	Date of receipt.	Estimated age on 31st March 1892, or on date of receipt, if received later.	Present age.	Number of years elephant has been working.	Condition.	Number of days. At work.	Number of days. At rest.	Number of days. Sick.	Remarks.
1	2	3	4		5	6	7	8	9	10			11
						Y.	Y.	Y. M.					
1	Hannah ..	Female ..	7	3	Before July 1891	33	46	More than 14 0	Good, strong ..	173	83	109	Cost price not known.
2	Arnold (Tusker) ..	Male ..	8	8	Do. ..	41	54	Do. 14 0	Worn out, weak ..	224	101	40	Do.
3	Bhairon Pershad (Tusker).	Do. ..	7	9	December 1895..	32	42	9 6	Good, strong ..	192	64	109	Rs. Cost price .. 3,488
4	Australia ..	Female ..	9	1	Before March 1886.	28	41	More than 19 0	Do. ..	283	82	..	Cost price not known.
5	Viper ..	Do. ..	7	9	Do. ..	36	49	Do. 19 0	Do. ..	235	83	47	Do.
6	Latchmi ..	Do. ..	7	¾	April 1891 ..	32	46	14 0	Good, fairly strong	270	78	17	Rs. Cost price .. 3,025
7	Sah pah (Tusker)	Male ..	7	10	March 1894 ..	33	44	11 0	Good, strong ..	290	75	..	" " .. 3,538
8	Bhokaung (Tusker).	Do. ..	7	11	Do. ..	36	47	11 0	Do. ..	249	65	51	" " .. 4,088
9	Shwe Daung (Tusker).	Do. ..	7	¾	Do. ..	34	45	11 0	Do. ..	239	68	58	" " .. 3,238
10	Paul (Tusker) ..	Do. ..	7	3	Do. 1895 ..	30	40	10 0	Do. ..	271	80	14	" " .. 3,763
11	Adulphas (Tusker)	Do. ..	7	3	Before March 1886.	23	36	More than 19 0	Fair, fairly strong	208	55	102	Cost price not known.
12	Pagi ..	Female ..	7	6	March 1894 ..	32	43	11 0	Fair, strong ..	292	73	..	Rs. Cost price .. 2,713
13	Wellington (Tusker).	Male ..	8	4½	Do. 1895 ..	35	45	10 0	Good, strong ..	239	58	68	" " .. 3,855
14	Maxie ..	Female ..	6	1	Born in January 1886.	6	19	3 0	Good, light work	286	79	..	Commenced work 1st July 1902.
15	Oswald (Tusker)..	Male ..	5	5½	Before March 1886.	40	53	More than 19 0	Fair, works well ..	227	88	50	Cost price not known.
16	Aurangabad ..	Female .	7	3	May 1892 ..	17	30	13 0	Good, fairly strong	247	65	53	Rs. Cost price .. 2,530
17	Jangi Pusi ..	Do. ..	8	2	April 1891 ..	27	41	14 0	Good, strong ..	239	58	68	" " .. 3,025
18	Kate ..	Do. ..	7	¾	Before March 1886.	22	35	More than 19 0	Do. ..	220	60	85	Cost price not known.
19	Sundri ..	Do. ..	7	1	Before July 1891	56	69	14 0	Worn out, blind..	229	62	74	Do.
20	Mahpah ..	Do. ..	7	6	March 1894 ..	31	42	11 0	Fair, fairly strong	261	63	41	Rs. Cost price .. 2,813
21	Behram (Tusker)	Male ..	7	10	December 1895..	28	38	9 6	Good, fairly strong	182	37	146	" " .. 3,355
22	Goolabi ..	Female ..	7	8	March 1895 ..	40	50	10 0	Fair, fairly strong	272	75	18	" " .. 2,605
23	Diamond Jubilee	Male ..	..	..	Born in August 1897.	5	8	..	Good, calf ..	..	..	..	..
24	Nineteen hundred	Do. ..	..	..	Born in January 1900	3	6	..	Do. ..	..	..	..	..
25	Mabel ..	Female ..	8	1	11th February 1902.	28	31	3 4	Fair, weak ..	179	67	119	Rs. Cost price .. 4,523
26	Suraj Mookhi ..	Do. ..	8	2	Do. ..	33	36	3 4	Fair, fairly strong	220	62	83	" " .. 4,523
27	Lilly ..	Do. ..	8	2	Do. ..	30	33	3 4	Good, fairly strong	276	73	16	" " .. 4,523
28	Raja Sheo ..	Do. ..	8	3	Do. ..	35	38	3 4	Fair, fairly strong	14	5	346	" " .. 4,523
29	Gulbadan ..	Do. ..	7	9	Do. ..	26	29	3 4	Do. ..	300	65	..	" " .. 4,523
30	Rani ..	Do. ..	8	1	Do. ..	30	33	3 4	Do. ..	236	70	59	" " .. 4,523
31	Moti Mallah ..	Do. ..	7	6	Do. ..	25	28	3 4	Good, strong ..	287	73	5	" " .. 4,523
32	Delhi ..	Do. ..	7	8	Do. ..	26	29	3 4	Do. ..	257	79	29	" " .. 4,523
33	Meerut ..	Do. ..	7	10	Do. ..	27	30	3 4	Good, fairly strong	297	64	4	" " .. 4,523
34	Bhola Nath (Tusker).	Male ..	8	2	28th January 1903.	30	32	2 5	Good, strong ..	249	96	20	" " .. 5,914
35	Amir (Tusker)..	Do. ..	8	..	Do. ..	23	25	2 5	Do. ..	270	77	18	" " .. 5,915
36	Gopal Das (Tusker).	Do. ..	8	7	Do. ..	25	27	2 5	Do. ..	235	77	53	" " .. 6,215
37	Lutchmi Pershad (Tusker)	Do. ..	8	1	Do. ..	30	32	2 5	Do. ..	275	77	13	" " .. 6,415
38	Sundah Pershad (Tusker).	Do. ..	8	8	Do. ..	25	27	2 5	Do. ..	277	80	8	" " .. 5,915
39	Singasur Pershad (Tusker).	Do. ..	8	11	3rd January 1905.	30	30	0 6	Do. ..	86	67	26	" " .. 6,464
40	Jamna Pershad (Tusker).	Do. ..	9	3	Do. ..	27	27	0 6	Do. ..	100	67	12	" " .. 6,464
41	Ganga Pershad (Tusker).	Do. ..	7	11	Do. ..	25	25	0 6	Do. ..	89	72	18	" " .. 6,464
									TOTAL DAYS ..	8,975	2,723	1,979	

1. Elephant Khanum died on the 4th October 1904. Received on 10th February 1902.

B. B. OSMASTON,

Deputy Conservator of Forests, Andamans.

PORT BLAIR;

The 19th September 1905.

Annual Form No. 46.—[*Prescribed*].

Forest Department, India, Andamans Division.

Area of Reserved Forests, Protected Forests and Unclassed State Forests and Waste lands for the Forest year 1904-05.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1904. Acres.	Area on 1st July 1904. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 30th June 1905. Acres.	Area on 30th June 1905. Equivalent in square miles.	No. and date of Notification of addition or transfer, etc.	Remarks.
			Reserved Forests.								
Andamans..	..	Andamans	1. Navy Bay Padouk Plantation Reserve.	10	·04	..	..	10	·04	..	These forests have been simply declared "Reserved Forests" in the Local Official Gazette in accordance with the policy enunciated by the Inspector-General of Forests in his "suggestions" of 1891.
			2. Navy Bay Teak Plantation Reserve.	16				16			
			3. Ali Masjid Reserve ..	14,916	23·	..	..	14,916	23·	..	
			4. Mount Harriet Reserve	28,800	45·	..	..	28,800	45·	..	
			5. Brigade Creek Reserve,	2,344	3·66	..	..	2,344	3·66	..	
			6. Dhani Khari Reserve,	8,045	12·57	..	..	8,045	12·57	..	
			7. Hope Town Reserve ..	415	0·65	..	..	415	0·65	..	
			8. Shoal Bay Reserve ..	9,728	15·20	..	..	9,728	15·20	..	The Indian Forest Act is not in force in the Andamans.
			9. Port Meadows Reserve	12,160	19·00	..	..	12,160	19·00	..	
			10. Middle Strait Reserve,	23,411	36·58	..	..	23,411	36·58	..	
				99,845	156·00	..	..	99,845	156·00	156·00	
			Protected Forests. *Nil.*								
			Unclassed State Forests and Waste Lands.								
				1,148,893	17·95	..	* 37	1,148,856	1,795	..	These areas were cleared for cultivation by the Settlement.
			Total ..	..	..	..	..	..	1,951	..	

Form No. 47.

Statement showing the Progress made in, and the Expenditure incurred on, Forest Settlements during 1904-05.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year.	Areas finally settled during the year. Number and date of Government order according final sanction to the Settlement.	Name of forest settled.	Area in square miles.	Expenditure incurred during the year on areas finally settled— In Forest accounts.	In other accounts.	Entire cost per square mile of area finally settled during the year.	Areas undergoing settlement. At commencement of the year. Name of tract.	Area in square miles.	Taken in hand during the year. Name of tract.	Area in square miles.	Expenditure incurred during the year on areas undergoing settlement— In Forest accounts.	In other accounts.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		q. miles.				Rs.	Rs.	Rs.					Rs.		
Andamans..	Andamans	156	..	..	..	..	..	..	..	..	..	..	..	..	

Form No. 48.

Record of Demarcation and Maintenance of Boundaries, 1904-05.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries not demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans ..	..	..	42	42	29	116	187	..	..	

N.B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub-divisions, such as blocks, compartments, coupes.

Form

Statement of Forest areas surveyed and under

Division.	Areas surveyed and under															
	Special surveys—Maps on 4" scale or over, by Survey of India Department or Forest Survey Branch.								*Ordinary, included in District Surveys.*							
	WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.		
	With details of growing stock.		Without details of growing stock.		Total cost.	Previous.	Of the year.	Total cost.	With details of growing stock.		Without details of growing stock.		Total cost.	Previous.	Of the year.	Total cost.
	Previous.	Of the year.	Previous.	Of the year.					Previous.	Of the year.	Previous.	Of the year.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Ms.	Rs.	Sq. Ms.	Sq. Ms.	Sq Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.
Andamans ..	..	..	166	..	..	..	..	..	248	..	1,951	..	..	..	..	..

Form

Progress made in Work

Division.	Areas for which Working-Plans have been completed.		Areas for which Working-Plans are being compiled.	
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.
1	2	3	4	5
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.
Andamans	...	...	...	...

Form

Communication and

Division.	New work undertaken during the year.					
	Buildings.		Roads and Paths.			Total expenditure on new work.
	Description of Building.	Expenditure incurred.	Road or path and object of the same.	Length of road or path.	Expenditure incurred.	
1	2	3	4	5	6	7
		Rs.		Miles.	Rs.	Rs.
Andamans ...	...	...	Construction of steam Tramway Wimberley Gunj.	...	17,563	...
	Permanent convict barrack completed.	401				
	Permanent quarter for elephant jemadar.	37				
	Permanent quarter for subordinates.	125				
	Stabling for subordinate quarters.	5				
	Temporary convict barracks.	795				
	Temporary Guard house.	20				
	Temporary cook house for convicts.	33				
	Temporary Watersheds for convicts.	5				
	Temporary Rest-house for executive staff.	13				
	Total ...	1,434	...	Total ...	17,563	18,997

No. 49.

survey during the year 1904-05.

survey during the year.										COST.			
Chain and compass or other surveys by local officers.													
WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			Area remaining to be taken under survey.	Total forest area at end of the year, as per Form No. 46.	Previous.	Of the year.	Entire cost of all surveys to end of the year.	REMARKS.
4-inch or over.		Under 4-inch.		Total cost.	Previous.	Of the year.	Total cost.						
Previous.	Of the year.	Previous.	Of the year.										
18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Rs.	Rs.	
..	..	..	..	..	..	..	..	..	1,951	(a)	..	..	(a) Not accurately known. The cost of the Andamans survey is not known.

No. 50.

ing-Plans, 1904-05.

Areas for which Working-Plans have still to be taken in hand.	Total Forest area, as in Form No. 46.	Entire cost, per square mile, of Working-Plans completed.	REMARKS.
6	7	8	9
Sq. Ms.	Sq. Ms.	Rs.	
1,951	1,951	...	Reserved forests 156 square miles. Unclassed State Forests 1,795 square miles.

No. 51.

Buildings, 1904-05.

REPAIRS EXECUTED DURING THE YEAR.						
BUILDINGS.		ROADS AND PATHS.			Total expenditure on repairs.	REMARKS.
Nature of Repairs.	Expenditure incurred.	Nature of repairs.	Length repaired.	Expenditure incurred.		
8	9	10	11	12	13	14
	Rs.		Miles.	Rs.	Rs.	
Repairs to temporary convict barracks.	1,154	...	...	...	-	
Repairs to Guard house.	46	Repairs to steam tram road.	...	16		
Total ...	1,200	...	Total ...	160	1,360	

Form No. 54.

Area closed and open to Grazing during 1904-05.

Division.	Area, in square miles.						Remarks.
	Closed to all animals.		Closed to browsers (camels, goats or sheep).		Open to all animals.	Total area.	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.		
1	2	3	4	5	6	7	8
			Reserved Forests.				
			.. ..		0·04	156	
Andamans . .	155·96	...	*Protected Forests.* *Nil.*				
			Unclassed State Forests.				
			.. ..		1,795	1,795	

Form No. 56—[*Prescribed*].

Area of Plantations, 1904-05.

Division.	Name of Plantation.	Area in acres.				Receipts	Charges	Remarks.
		On 1st July 1904.	Added during the year.	Excluded during the year.	Area on 30th June 1905.	Of the year.		
		Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	
	Regular Plantation.							
	Navy Bay ...	10	...	...	10	...	...	
	Goplakabang ...	177	...	...	177	...	268	
	Bindraban Padouk ...	...	102	...	102	...	366	
	Brigade Creek Mangrove.	277	67	...	344	...	407	
	Namunaghar Para rubber	...	1	...	1	...	...	
	Dhani Khari Mangrove,	226	...	...	226	...	...	
	TOTAL ...	690	170	...	860	...	1,059	
Andamans .	*Cultural Operations.*							
	Goplakabang, 1889-90...	92	...	...	92	...	...	
	Goplakabang Valley ...	5	...	...	5	...	...	
	Namunaghar Padouk ...	2	...	...	2	...	...	
	Ditto Mahogany	1	...	...	1	...	...	
	TOTAL ...	100	...	...	100	...	...	
	Maintenance of Plantations ...	...	...	...	...	...	1,230	Miscellaneous expenditure on the upkeep of existing plantation.
	GRAND TOTAL ...	790	170	...	960	...	2,989	

FORM No. 57.

Outturn (in cubic feet, solid) of Timber and Fuel during the Forest year 1904-05 and Agency of exploitation.

Form

Outturn (in cubic feet, solid) of Timber and Fuel during the

Division.	Timber in the rough : Logs.					Timber in the rough : Poles.					Sawn or square Timber.				
	Government.	Purchasers.	Free Grantees	District Officers.	Total.	Government.	Purchasers.	Free Grantees	District Officers.	Total.	Government.	Purchasers.	Free-Grantees	District Officers.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
											I.—Reserved Forests.				
Andamans	217,797	* 15,431	...	...	233,228	1,725	...	† 9,425	49,530	60,680	‡ 45,852	...	...	...	45,852
Total .	217,797	15,431	...	...	233,228	1,725	...	9,425	49,530	60,680	45,852	...	...	...	45,852
											II.—Protected Forests.				
											Nil.				
Total .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
											III.—Unclassed Forests.				
Andamans	155,599	* 17,212	...	...	172,811	1,920	...	† 18,850	64,286	85,056	‡ 70,108	...	...	...	70,108
Total .	155,599	17,212	...	...	172,811	1,920	...	18,850	64,286	85,056	70,108	...	...	...	70,108
Grand Total .	373,396	32,643	...	...	406,039	3,645	...	28,275	113,816	145,736	115,960	...	...	...	115,960

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it being
In the "Remarks" column of this form it should be shown which of the figure entered in it are *actuals*

No. 57.

year 1904-05, *and Agency of exploitation.*

Miscellaneous.					Fuel.					Total outturn.	Remarks.
Government.	Purchasers.	Free Grantees	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.		
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
c. ft.	c. ft.	c. ft	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
...	...	...	...	...	141,093	131	§ 49,481	24,850	2,15,555	5,55,315	
...	...	...	...	...	141,093	131	49,481	24,850	2,15,555	5,55,315	
...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	648,200	262	§ 197,924	186,693	1,033,079	1,361,054	
...	...	...	...	...	648,200	262	197,924	186,693	1,033,079	1,361,054	
...	...	...	...	...	789,293	393	247,405	211,543	1,248,634	1,916,369	

* Actual.

† An estimate based on numbers of free grantees' huts. Add 10 ballis = five cubic feet and two posts = 10 cubic feet are allowed for each house.

‡ Rough hewn logs.

§ There are 1,885 householders and quantity of fuel removed per house is estimated at 1½ cords per annum; one cord = 87½ cubic feet solid.

entered in cubic feet solid.

and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 58—[*Prescribed*].

FOREST DEPARTMENT, INDIA, ANDAMANS.

Outturn of Minor Forest Produce during the year 1904-05,

Description of Produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
	By Government Agency.		By Purchasers.		By Free grants.		By District Officers.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12
		Rs.		Rs.		Rs.		Rs.		Rs.	
					I.—Reserved Forests.						
Bamboos . . No.	3,000	4	35,200	44	125,666	157	112,875	141	276,741	346	The entries in columns 6 and 7 are *estimates* based upon the following data. 1,885 self-supporters and free residents houses each of which is allowed— 200 bamboos, 40 canes, 20 bundles thatching leaves. Annually. All the other figures are actuals.
Canes . . . „	4,130	2	49,600	31	25,133	16	106,275	66	185,138	115	
Canes with roots „	...	...	12,800	16	...	...	...	...	12,800	16	
Thatching leaves. bdls.	...	...	4,176	261	12,566	785	645	40	17,387	1,086	
Bark . . . lb.	...	...	...	...	...	...	...	...	...	...	
Total .	...	6	...	352	...	958	...	247	...	1,563	
					II.—Protected Forests. *Nil.*						
					III.—Unclassed State Forests.						
Bamboos . . No.	37,270	46	12,000	15	251,334	314	305,576	382	606,180	757	In addition canes exported were taxed and a further sum of Rs. 254 was realized.
Canes . . . „	7,654	5	24,000	15	50,267	31	262,530	164	344,461	215	
Canes with roots „	...	...	27,200	34	...	...	...	...	27,200	34	
Thatching leaves. bdls.	753	47	2,080	130	25,134	1,571	863	54	28,830	1,802	
Gurjan oil . . lb.	102,647	6,415	...	...	...	...	...	...	102,647	6,415	
Bark . . . „	98,151	307	...	...	...	...	...	...	98,151	307	
Total .	...	6,820	...	194	...	1,916	...	600	...	9,530	
GRAND TOTAL .	...	6,826	...	546	...	2,874	...	847	...	11,093	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 59.

FOREST DEPARTMENT. INDIA, ANDAMANS.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally, or otherwise disposed of, during the year 1904-05.

Name of Division.	Balance at commencement of the year in forests and sale depots.	Received during the yeaar.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
		Padouk.			
	1,25,008	3,52,971	4,77,979	4,02,825	75,154
		Koko.			
	3,640	14,917	18,575	16,897	1,660
		Chuglam black.			
	8,560	9,835	18,395	15,392	3,003
Andamans		*Chuglam white.*			
	18,132	18,794	36,926	35,128	1,798
		Marble wood.			
	156	399	555	520	35
		Satin wood.			
	121	52	173	35	138
TOTAL .	1,55,617	3,96,968	5,52,585	4,70,797	81,788

Form No. 59.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally, or otherwise disposed of, during the year 1904-05.

Name of Division.	Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
			Other timber.		
Andamans	66,112	2,34,262	3,00,374	2,72,003	28,371
			Firewood.		
	57,838	7,89,293	8,47,131	8,07,406	39,725
Total ...	1,23,950	10,23,555	11,47,505	10,79,409	68,096

Form No. 60A—[*Prescribed*].

Abstract showing the Value of Timber and other Produce at sale Depôts for the year 1904-05.

Description of Timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.		Remarks.
	No.	C. ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
			Rs.			Rs.	Rs.	Rs.	Rs.
Logs ...	4,257	188,261	1,30,605	2,594	80,892	80,729	...	49,876	For.
Planks ...	...	33,468	39,698	...	29,267	28,074	...	11,624	Against . 62,348
Firewood ...	...	57,838	2,664	...	39,725	1,816	...	848	Against... 62,348
Total ...	4,257	2,79,567	1,72,967	2,594	1,49,884	1,10,619	...	62,348	

Form No. 60B—[*Prescribed*].

Abstract showing the Value of Live and Dead Stock for the year 1904-05.

Description of Live and Dead Stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in Value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
		Rs.		Rs.	Rs.	Rs.	
Elephants ...	39	56,057	41	66,789	10,732	...	One elephant, "Malatoo" belonging to the Settlement, but used by Forest Department, not included in the list. One elephant died during the year. Three elephants were purchased during the year.
Buffaloes ...	32	661	32	501	...	160	
Boats timber towing,	23	13,079	23	12,729	...	350	
Lighters ...	2	2,662	2	2,446	...	216	
Carts, small ...	2	37	2	33	...	4	
Crane ...	1	285	1	271	...	14	
Portable tramway...	22¾ miles, 1 locomotive, 37 trucks, 5 trollies.	1,36,252	25¾ miles, 1 locomotive, 100 trucks, 5 trolleys	1,48,922	12,670	...	Three miles portable tramway was purchased.
Office furniture ...	...	343	...	326	...	17	
Miscellaneous stores, axes, dahs, winches, etc., etc.	...	12,622	...	14,965	2,343	...	Rs. For ... 99,434 Against... 1,832
Dingy	2	133	2	130	...	3	For ... 97,602
Forester's boat ...	1	131	1	138	7	...	
Steam Timber boat "Rosamond."	...	...	1	73,652	73,652	...	Machinery and stores only.
Steam launch, *Eileen*	1	15,731	1	14,945	...	786	
Jolly-boats ...	3	597	3	627	30	...	
Buildings ...	...	5,653	...	5,371	...	282	At Wimberley Gunj and Anikhet.
Total ...	...	2,44,243	...	3,41,845	99,434	1,832	

Form No. 61—[*Prescibed*].

Summary of Revenue of the Andamans Division during 1904-05.

REVENUE.

	Rs.	A.	P.
I.—Timber and other produce removed from the Forests by Government Agency—			
a. Timber	5,43,356	0	0
b. Firewood and charcoal	38,377	0	0
c. Bamboos	...		
d. Sandal-wood	...		
e. Grass and other minor produce	7,814	0	0
Total I	5,89,547	0	0
II.—Timber and other produce removed from the Forests by consumers or purchasers—			
a. Timber	2,323	0	0
b. Firewood and charcoal	3	0	0
c. Bamboos	59	0	0
d. Grazing and fodder grass	...		
e. Other minor produce	741	0	0
f. Forest stamps	...		
g. Other items	...		
h. Commutation fees	...		
Total II	3,126	0	0
III.—Drift and waif wood and confiscated forest produce	...		
Total III	...		
IV.—Revenue from Forests not managed by Government—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forest	...		
Total IV	...		
V.—Miscellaneous—			
a. Fines and forfeitures	4	0	0
b. Refunds	1,575	0	0
c. Other sources	1,102	0	0
Total V	2,681	0	0
Grand Total Revenue	5,95,354	0	0

Form No. 61—[*Prescribed*].

Summary of Expenditure of the Andamans Division, 1904-05.

EXPENDITURE.

A.—CONSERVANCY AND WORKS.

I.—Timber and other produce removed from the Forests by Government Agency—			
a. Timber	1,39,407	0	0
b. Firewood and charcoal	15,645	0	0
c. Bamboos	...		
d. Sandal-wood	...		
e. Grass and other minor produce	3,494	0	0
Total A. I	1,58,546	0	0

EXPENDITURE—*contd.*

A.—CONSERVANCY AND WORKS—*contd.*

	Rs.	A.	P.
II.—Timber and other produce removed from the Forests by Consumers or Purchasers	...		
Total A. II .	...		
III.—Drift and waif wood and confiscated Forest Produce . .	...		
Total A. III .	...		
IV.—Revenue from Forests not managed by Government—			
a. Duty on foreign timber and other forest produce . . .	...		
b. Revenue from shared and private forests . . .	...		
Total A. IV .	...		
V.—Rent of leased Forests and payments to Shareholders in Forests managed by Government	...		
Total A. V .	...		
VI.—Live Stock, Stores, Tools and Plant—			
a. Purchase of cattle	13,500	0	0
b. Feed and keep of cattle	37,936	0	0
c. Purchase of stores, tools and plant	70,509	0	0
Total A. VI .	1,21,945	0	0
VII.—Communications and Buildings—			
a. Roads and bridges	17,723	0	0
b. Buildings	2,634	0	0
c. Other works	...		
Total A. VII .	20,357	0	0
VIII.—Organization, improvement and extension of Forests—			
a. Demarcation	...		
b. Cost of Settlements ; compensation for land and rights . .	...		
c. Surveys	...		
d. Working-plans	1,467	0	0
e. Sowing and planting	2,289	0	0
f. Protection from fire	...		
g. Other works	...		
Total A. VIII .	3,756	0	0
IX.—Miscellaneous—			
a. Law charges	...		
b. Other charges	8,211	0	0
Total A. IX .	8,211	0	0
Total A.—Conservancy and Works .	3,12,815	0	0

EXPENDILURE—*contd.*

A—CONSERVANCY AND WORKS—*contd.*

B.—ESTABLISHMENTS.

		Rs.	A.	P.
I.—SALARIES—				
a. Conservators		...		
b. Superior officers		21,032	0	0
c. Subordinate forest and depôt establishments		4,249	0	0
d. Office establishments		2,682	0	0
e. Deputation and special allowances		1,023	0	0
f. Exchange compensation allowance		1,107	0	0
TOTAL B. I.		30,093	0	0
II.—TRAVELLING ALLOWANCES—				
a. Conservators		...		
b. Superior officers		3,138	0	0
c. Subordinate forest and depôt establishments		815	0	0
d. Office establishments		...		
TOTAL B. II		3,953	0	0
III.—CONTINGENCIES—				
a. Stationery		55	0	0
b. Carriage of tents and records		...		
c. Rents, rates and taxes		...		
d. Pay of police guards		...		
e. Official postage		138	0	0
f. Sundries		457	0	0
TOTAL B. III		650	0	0
TOTAL B.—ESTABLISHMENTS		34,696	0	0
GRAND TOTAL OF EXPENDITURE		3,47,511	0	0
SURPLUS		2,47,843	0	0

CALCUTTA :
The 24th August 1905.

S. C. MITRA,
Deputy Comptroller, India Treasuries.

Form No. 62—[*Prescribed*].

Account Current for the Forest year 1904-05.

RECEIPTS.	Rs.	A.	P.	Rs.	A.	P.	PAYMENTS.	Rs.	A.	P.	Rs.	A.	P.
Cash Balance	...			...			I.—Refunds and Drawbacks ...	..			4,769	6	3
VIII.—Assessed taxes—							Expenditure as per Annual Summary, Form No. 61.	—			3,47,511	1	5
Income Tax—Deductions from salaries.	...			510	13	2	Forest Deposits	...			...		
Revenue as per Annual Summary, Form No. 61.	—			5,95,354	5	6	Forest Advances	...			15,426	3	3
XII.—Interest	...			...			Suspense Account	...			...		
Forest Deposits	...			...			Savings Bank Deposits—						
Forest Advances	...			15,246	9	3	Bank Account—						
Suspense Accounts	...			—			Forest Officers' Provident Fund.	...					
Service Funds—							Cash Remittances—Local—Forest Remittances—						
Uncovenanted Service Family Pension Fund, Bengal.	...						Remittances to Treasuries ..	4,23,516	7	2			
Savings Bank Deposits—							Unpaid cheques written back ...	...					
Bank Account—							Inter-divisional Transfers ...	...					
Forest Officers' Provident Fund.	2,006	0	0								4,23,516	7	2
Special Account—							Account Current with Foreign States—						
General Family Pension Fund...	420	0	0				Berar Suspense Account ...	...			...		
				2,426	0	0	His Majesty's Colonial Government, Ceylon.	...					
Cash Remittances—Local—Forest Remittances—													
Forest cheques drawn ...	1,76,043	12	11				Exchange Account with other Governments—						
Revenue Remittances written back.	7	8	0				Account between India and Burma—						
Inter-divisional Transfers ...	...						II.—Forest Remittances from India to Burma.	3,047	0	4			
				1,76,051	4	11	IV.—Items adjustable by Burma.	932	7	8			
Account Current with Foreign States—							Account between India and Bengal						
Berar Suspense Account ...	...						II.—Forest Remittances from India to Bengal.	277	0	10			
His Majesty's Colonial Government, Ceylon.	...						IV.—Items adjustable by Bengal.	5,365	5	8			
				...			Account between—and—						
Exchange Account with other Governments—	...						—Forest Remittances from—to—	...					
Account between India and Burma—							—Items adjustable by— ...	...					
I.—Forest Remittances to India from Burma.	200	0	0				Account between—and—						
—Items adjustable by— ...	...						—Forest Remittances from—to—	...					
Account between India and Bengal—							Account between—and—						
I.—Forest Remittances to India from Bengal.	1,573	5	7				—Forest Remittances from—to—	...					
III.—Items adjustable by India.	1,909	0	3				Account between—and—						
Account between—and—							—Forest Remittances from—to—	...					
—Forest Remittances to—from—	...						Account between—and—						
—Items adjustable by— ...	...						—Forest Remittances from—to—	...			...		
Account between—and—							Account between—and—						
—Forest Remittances to—from—	...						Forest Remittances from—to—	...			...		
Account beween—and—							Account between—and—						
—Forest Remittances to—from—	...						—Forest Remittances from—to—	...			...		
Account between—and—							—Items adjustable by— ...	...			...		
—Forest Remittances to—from—	...						Account between—and—						
Account between—and—							—Forest Remittances from—to—	...			...		
—Forest Remittances to—from—	...			...			—Items adjustable by— ...	...					
—Items adjustable by— ...	...			...							9,621	14	6
Account between—and—							Inter-Departmental Transfers—						
—Forest Remittances to—from—	...						P. W. Department, Ordinary Branches.	2	8	0			
—Items adjustable by — ...	...						,, ,, Railway Branch						
				3,682	5	0	Military Department, Bengal Command.	...					
Inter-Departmental Transfers—							,, ,, Punjab ,, ...	...					
P. W. Department, Ordinary Branches.	22,046	9	3				,, ,, Madras ,, ...	...					
,, ,, Railway Branch.	...						,, ,, Bombay ,, ...	...					
Military Department, Bengal Command.	236	9	0				Telegraph Department ...	...					
,, ,, Punjab ,, ...	...						Post-Office Department ...	...					
,, ,, Madras ,, ...	...						Marine Department ...	3,319	4	7			
,, ,, Bombay ,, ...	...						Civil Departments ...	1,48,097	11	8			
Telegraph Department ..	...										1,51,419	8	3
Post-Office Department ...	...			...			Cash Balance	...			...		
Marine Department ...	26,062	2	0	...									
Civil Departments	1,10,647	13	11										
				1,58,993	2	2							
GRAND TOTAL ...	...			9,52,264	8	10	GRAND TOTAL	...			9,52,264	8	10

S. C. MITRA,
Deputy Comptroller, India Treasuries.

CALCUTTA:
The 24th August 1905.

Form No. 63.

Revenue received and outstandings on account of Revenue during 1904-05.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during the year.	Total.	Amount realized during year.	Balance due to the Department at end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Andamans	Timber, firewood and gurjan oil, etc.	37,017 13 11	6,06,675 11 8	6,43,693 9 7	*5,91,576 8 3	52,117 1 4	*Rs. 2,029-1-1 written off.
	Other revenue	...	5,806 14 4	5,806 14 4	5,806 14 4	...	
	Total	37,017 13 11	6,12,482 10 0	6,49,500 7 11	5,97,383 6 7	52,117 1 4	

B. B. OSMASTON,
Deputy Conservator of Forests, Andamans.

Port Blair :
The 19th September 1905.

Form No. 64—[*Prescribed*].

Outstandings and liabilities on account of Contractors and disbursers for the forest year 1904-05.

Division.	Department Debtor.			Department Creditor.			Balance due.	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Andamans	...	15,246 9 3	15,246 9 3	3 11 6	15,426 3 3	15,429 14 9	183 5 6	...
Total	...	15,246 9 3	15,246 9 3	3 11 6	15,426 3 3	15,429 14 9	183 5 6	...

S. C. MITRA,
Deputy Comptroller, India Treasuries.

Calcutta :
The 24th August 1905.

Form No. 65—[*Prescribed*].

Financial results of the year 1904-05.

Division.	Timber and other produce removed from the Forests by Government Agency.		Other revenue.		Formation, protection and improvement of Forests.	Total.	
	Receipt.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Andamans	5,89,547	3,35,113	5,807	1,018	11,380	5,95,354	3,47,511
Total	5,89,547	3,35,113	5,807	1,018	11,380	5,95,354	3,47,511

B. B. OSMASTON,
Deputy Conservator of Forests, Andamans.

Port Blair :
The 19th September 1905.

1907

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1905-06.

CALCUTTA:

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, INDIA.

Price Eight Annas or 9d

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CALCUTTA:

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, INDIA.

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No. 1854, dated Port Blair, the 12th October 1906.

From—Major H. A. Browning, I.A., Chief Commissioner, Andaman and Nicobar Islands and Superintendent of Port Blair,

To—The Secretary to the Government of India, Department of Revenue and Agriculture, Simla.

Sir,—I have the honour to submit, in original, letter No. C. C.—142, dated the 19th ultimo, from the Deputy Conservator of Forests, Port Blair, together with his annual report for the year 1905-06, with forms and appendix.

2. The field work which commenced in November 1905, of a working-plan party in the North Andaman under Mr. F. H. Todd, Deputy Conservator of Forests, was completed in May 1906. The report will be written by Mr. Todd in Simla. Mr. Rogers' exploration report of the South and portion of the Middle Andaman has been received and submitted to Government. A preliminary advertisement has been published regarding the purchase on a long lease of the timber available for extraction from the North and Middle Andamans.

3. Seven new elephants were purchased during the year, one was killed by an old tusker elephant and three which were old and past work were let loose in the forests. Of the stock (48) at close of the year, 37 were at work.

4. The Wimberley Ganj steam tram line has been completed as far as Kalatang and will convey 30 logs daily. In addition, 18 miles of temporary tramway were maintained. A small extension of some 3 miles is under construction which by obviating tidal difficulties will still further expedite the transit of timber.

5. By the completion of the steam timber boat "Rosamond," the dangerous and unsatisfactory practice of rafting logs during rough weather is obviated. The boat well justified its construction and has proved of great utility in the conveyance of logs; in calm weather she should be able to tow a raft of 400 logs in addition to the 120 to 150 logs she carries in her hold, making two trips per week if required.

6. The Deputy Conservator of Forests reports that small fires occur occasionally in the forests, and that an area of 10 acres in the padouk plantation of 1904 was burnt in two patches by fire where some damage was done. It is satisfactory, however, to know that these fires do not spread owing to the dense shade and the heavy rainfall. No special measures for protection from fire are therefore necessary.

7. In the uncertainty as regards the future of the Settlement, it does not seem expedient to open out extensive cultivation of padouk. This mode of reproduction is nevertheless pursued and padouk seed was freely sown at Goplakabang where 177 acres of forest were cleared and burnt for the purpose. The seeds of the local para rubber trees germinate better than imported seed and local seedlings are stouter and healthier than the imported plants.

8. Government has vetoed the establishment of a free saw mill as unnecessary and directed that as much padouk as possible be disposed of in the log and that none be extracted from the forest but such as is marketable. It has however agreed to sawing gangs being located in the forests subject to stringent conditions as to the number of sawyers and the period and locality of their employment. There is no doubt that timber put on the market in the form of sawn slabs is attractive. Padouk trees in the vicinity of the Settlement and logs which were too hollow and imperfect for the American market,

but of good colour, were accordingly sawn and exported, and it is expected that a good margin of profit will be realised. The disadvantages of hand-sawn slabs are however considerable. The cost of free labour is very expensive, and the work of S. S. convict sawyers bad and wasteful, the result being that hand-sawn timber costs double that of mill-sawn timber, is not so attractive in appearance and is much less marketable. A further proposal on the subject of sawing a small quantity of padouk for export at the Government saw mill, a work which will be possible without interfering with Government demands, will shortly be submitted. It does not seem that the saw mills are worked as yet to their full capacity.

9. The dry depôt established at Chatham is a decided improvement over the present tidal depôt at Haddo, where the difficulties experienced in inspecting and measuring timber and the destruction of logs wrought by the teredo are great. With his timber all round him the Deputy Conservator of Forests is well placed at Chatham. The wet Haddo depôt will shortly be entirely abandoned.

10. Six hundred and six thousand one hundred and ninety-eight cubic feet of timber against 493,001 last year were extracted during the year by Government agency. There was a decrease in the quantity of padouk exported owing to unfavourable weather for rafting. There remain 4,310 tons of padouk timber to be supplied to Messrs. Gillanders, Arbuthnot & Co., in fulfilment of the contract for the supply of 12,000 tons.

11. The surplus (Rs. 2,36,539) of revenue over expenditure is less than that (Rs. 2,47,843) last year, but is well over the average (Rs. 1,34,693) for the past five years, which is satisfactory. If the difference in value of stock in hand were taken into account, the surplus revenue over expenditure this year would be Rs. 69,608 more than last year, while the total revenue will be Rs. 71,853 more than last year.

12. Mr. Osmaston left before I took over charge. My prodecessor reported him to be an excellent officer. Mr. Trafford is energetic and capable and has managed the Forest Department to my entire satisfaction.

No. C. C.—142, dated Port Blair, the 19th September 1906.

From—F. TRAFFORD, Esq., Deputy Conservator of Forests, Andamans,

To—The Chief Commissioner and Superintendent of Port Blair.

SIR,—I have the honour to forward herewith the Annual Progress Report of Forest Administration in the Andamans for 1905-06.

G. I. C. P. O.—No. 1184 R. & A.—18-1-1907—148—B. M.

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR

1905-06.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

I.—ALTERATION OF AREAS.

1. There has been no alteration in the area of the Reserved Forests. Three hundred and sixteen acres of Unclassed Forests have been brought under cultivation during the year. Form 51.

II.—FOREST SETTLEMENTS.

2. None undertaken or required. Form 52.

III.—DEMARCATION.

3. The boundary of the Mount Harriet Reserve between Goplakabang and Kalatang tea garden was demarcated where some slight encroachments had taken place. The new Government Tea Garden extension at Kalatang having absorbed 71 acres of Reserved Forest and a vegetable garden 14 acres. Form 53.

IV.—FOREST SURVEYS.

4. A survey party from the Forest branch of the Indian Survey Department accompanied the Working-Plans party in the North Andaman island to assist in determining the areas occupied by deciduous forest. Form 54.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—REGULATION OF MANAGEMENT.

(a) Preparation and control of Regular Working-Plans.

5. No working-plan exists for the Andamans Forest. Form 55.

(b) Preliminary Working-Plan Reports.

6. Mr. Rogers' report on the results of his exploration of the South Andamans and portion of the Middle Andamans has been submitted direct to the Government of India. The padouk timber on a considerable part of the area dealt with in this report has in the meantime been worked out.

7. A Working-Plan party under Mr. F. H. Todd, Deputy Conservator of Forests, proceeded to the North Andaman in November 1905. Field work was commenced on the west coast at Stewart Sound and finished on the east coast at that locality on the 15th May 1906.

The area dealt with in the Plan contains about 317 square miles of forest of which 98,464 acres is padouk-bearing. Linear valuation surveys were undertaken over about 20 per cent. of the area. The party consisted of one Extra Assistant, 2 Rangers, 9 Burman enumerators (imported) and some 200 convicts, a steam launch and 4 timber boats were utilized for moving camp and keeping the party supplied with rations from Port Blair.

(*c*) *Annual Plans of Operations.*

8. The provisions of the plan-of-operations were carried out.

II.—Communications and Buildings.

(*a*) *Roads and bridges.*

Wimberley Ganj Steam Tramway.

Form 56.

9. The permanent way has now been completed as far as the Kalatang terminus, the extension covering 15,050 feet, not including 500 feet of siding for shunting purposes.

In order to avoid too sharp gradients the original level of the embankments had to be raised in several places. The earthwork done amounting to 142,800 feet. The embankments have been planted with grass and the line ballasted throughout. The line is now in working order and will convey 30 logs daily when the engines are in working order. Total amount spent during the year in alterations, extensions and repairs amounting to Rs. 8,984.

Temporary tram lines.

10. There are 18 miles of temporary line, 11 miles being used for trucking logs and 7 miles for conveying firewood for the Settlement.

Buffaloes are used for the former, firewood trucks being propelled by manual labour.

Of the 11 miles of temporary timber tram lines, 2 miles form a diversion of the steam tram line and have been retained in case of any block in the permanent way. The forest adjoining the remaining 9 miles of temporary line from Anikhet to Temple Ganj having been worked out, this line has been used for bringing logs overland to Port Blair from the west coast until the new steam timber boat was ready. This tramway will now be no longer required for transporting logs or firewood.

11. *Fuel tram line.*—These are gradually extended as the fuel in their vicinity is worked out. The Namuna Ghar line was extended 1,512 feet and the Bindraban line 6,358 feet.

12. Expenditure on upkeep and extension of temporary lines amounted to Rs. 2,542 as compared with Rs. 8,779 spent in the previous year.

(*b*) *Buildings.*

13. *Permanent.*—The blacksmith shop at Wimberley Ganj was extended by 25 feet at a cost of Rs. 6.

Repairs were done to the quarters of two range officers, one forester, one munshi, one engine driver and one police guard, also to a ration godown and blacksmith's shop.

14. *Temporary.*—Twenty new buildings of a temporary nature were erected which included one rest-house, one forester's quarter and three police guards' houses. The others were convict barracks. This does not include small huts built at extraction camps where the outturn of timber is not likely to continue for more than three months. The cost of these buildings amounted to Rs. 1,364.

15. The chief difficulty experienced in moving camps is that of obtaining a suitable roofing material. At present palm leaves are used, but a great deal of labour is wasted in collecting them and they leak when the leaves dry up. The experiment of using corrugated iron sheeting which can be readily put up and removed when necessary was tried at the close of the year and is likely to be successful.

III.—Protection of Forests.

(*a*) *General protection.*

16. One petty forest case only was taken into Court and the accused fined. **Form 57.**

(*b*) *Protection from fire.*

17. Small fires occur occasionally in the forest, but they do not spread owing to the dense shade and frequent showers of rain which keep the ground moist.

18. Some damage was done in the padouk plantations owing to fire spreading from old hollow trees in the taungya of the current year. An area of 10 acres was burnt in the plantation of 1904 in two patches.

(*c*) *Protection from cattle.*

19. There is abundant pasture outside the Reserved Forests and near the villages and none within the forests so that there is no inducement to allow cattle to graze in the latter. **Form 59.**

(*d*) *Protection against injuries from natural causes.*

20. *Insects.*—The ravages of the weevil found on young padouk appear to gain in intensity annually and young trees in the padouk toungyas have been so eaten back as to look like tea bushes. No practical remedy appears available. Defoliators have also attacked teak trees. *Wind* has damaged a number of promising young teak trees planted in 1891-92 in the lines 80 feet apart owing to the intervening forest having been cleared this year to enable the space between the lines to be planted up.

IV.—Sylviculture.

(*a*) *Natural reproduction.*

21. There is nothing to record in addition to what has been said in previous years on the subject of reproduction of padouk. **Form 61.**

(*b*) *Artificial reproduction.*

(*i*) *Mangrove plantations.*

22. The planting up of bare salt marsh with mangrove seedlings was continued along the banks of natural *Khals*. An area of 38⅓ acres being planted in the Dhani Khari Reserve and 8½ acres in Brigade creek at a cost of Rs. 561.

The seeds germinate on the trees from which the seedlings can be detached and planted with a small outlay of labour.

(*ii*) *Padouk plantation.*

23. One hundred and seventy-seven acres of forest was cleared near Goplakabang and burnt; of this 115 acres consisted of the old padouk and teak plantation of 1890 formerly planted in lines 80 feet apart. Seeds of padouk were sown at stake between these lines at distances of 6′×6′, some 30 acres being planted 10′×4′ and in order to ensure a supply of seedlings to fill up vacancies, small nursery beds were made at intervals throughout the plantations in which padouk seeds were sown thickly. Sixty two acres were sown with seeds at stake 6′×6′ near Goplakabang. An area of 8 acres has been reserved for planting at stake seedlings of about two months old which have been sown thickly in beds scattered within this area.

24. The cost of clearing plantations during the year under report amounted to Rs. 4,079.

As there is likely to be a considerable decrease in the number of convicts sent to the Andamans in future years, it is open to question whether it is advisable to open out such large areas in future for taungya padouk cultivation until the necessity for constant clearances in the present plantation gradually ceases to exist which, owing to the slow rate of growth of padouk and the ravages of the weevil already noticed, will probably not be for some years to come.

(*c*) *Operations for the improvement of the growing stock.*

25. None undertaken.

(*d*) *Experiments.*

RUBBER.

26. In August 1905, 3,000 seeds of Para rubber were obtained from Ceylon and sown in a nursery; of these only 907 germinated; at the same time some seed was obtained from local trees and sown which yielded 4,702 seedlings. The whole of these seedlings of which 4,698 survived were transplanted in June 1905 after all their leaves had been removed and planted on an area of 26 acres at a distance of 15 feet apart; after a fortnight new leaves were thrown out. The majority of the stems did not die down to the ground as happened when transplanting last year. The local seedlings appeared stouter and healthier than those from imported seedlings.

27. The Divisional Officer, Tezpur, has been asked to supply seed of *Ficus elastica* for experiment.

28. Some seed of African Padouk (*Pterocarpus Angolensis*) received from Eastern Transvaal was sown but failed to germinate.

V.—EXPLOITATION.

(*a*) *System of management.*

(i) MAJOR FOREST PRODUCE.

29. Extraction camps are of two kinds—

(1) For padouk for export in areas hitherto unexploited.

(2) For other timber for the Settlement Saw Mill (used locally) in areas in which padouk has been almost entirely worked out, which being, however, nearer to Port Blair, the timber is brought in more rapidly.

As regards (1) camps were formed during the year on the west and north of Rutland island, five elephants being brought over Macpherson's Straits by swimming in December 1905, and four more elephants were brought over in May 1906 in rafts as they refused to swim. The camp in Baratang island during the south-west monsoon in 1905 was stationed in Middle Straits near Oral Kaicha and in December 1905 was removed to Rogolochang where it remained during the north-east monsoon. Owing to rough weather at the beginning of the south-west monsoon in 1906, this camp was again moved back to Middle Straits near Oral Kaicha.

30. The timber for the Saw Mill was brought from two extraction camps on the east coast (Putatang and Rangachang) within a few miles of Port Blair from which logs could be brought in one day, one camp on the west coast (Bajalanta Jig) and one on the south coast (Chirya Tapu). When the south-west monsoon set in these camps were concentrated at Chirya Tapu and Shoal Bay (Jirkatang) both of which are sheltered from the monsoon.

31. Fuel was felled near Namunaghar and Bindraban. The secondary growth on old fuel areas lead to the supposition that fellings may go over the same area in about fifteen years' time from the primary felling.

32. All trees were felled close to the ground.

(ii) *Minor forest produce.*

33. Bamboos, cane and thatching leaves were cut (1) departmentally, (2) by the Settlement and (3) by purchasers on permit. No restriction being imposed cane is beginning to get scarce near the Settlement. Gurjan oil for painting roofs is obtained by tapping in the dry months. Small quantities of mangrove bark are collected for the Workshops.

(*b*) *Agency of Exploitation.*

(i) DEPARTMENTAL AGENCY.

(*a*) *Timber.*

TRANSPORT BY LAND.

34. Logs brought from the areas draining into Shoal Bay are conveyed by the steam tramway from the latter to Brigade creek in Port Blair harbour. Logs cut at Jirkatang were made into rafts with canes (chain being only required in the open sea) and floated to Kalatang where they were hoisted into trucks and hauled by steam engine overland to Kadakachang where they are again made into rafts. It is open to question whether in calm weather it would not be better to float the logs down Shoal Bay creek and bring them into Port Blair by the steam timber boat or by towing by launch. The bar across the mouth of Shoal Bay prevents loading of logs on the *Rosamond* within the creek. The distance is ten times as long, but the handling of the logs in rafts and on the tram line would be saved.

Elephants.

35. Seven new elephants were purchased at Tavoy and shipped to the Andamans during the year at a total cost of Rs. 44,182. They arrived in Port Blair on April 26th and until the end of the year were employed on very light dragging work. One of the new elephants was killed recently by an old tusker elephant who drove one of his tusks through its heart.

36. Three old elephants which were past work were let loose in the forest as they did not earn their keep.

37. The total number of elephants at work at the close of the year was 37 not including the six new elephants or two young elephants born locally in 1895 and 1900 respectively. There were no casualties from sickness and the elephants are on the whole in very good condition. The system of rewarding convict Mahouts whose elephants keep healthy and free from sores works well.

38. The average daily number of convicts employed in extracting timber was 700 as compared with 649 during 1904-05.

Transport by water.

39. The bulk of the timber, after being brought to the water either in Mangrove creeks, many of which zigzag for several miles, or the sea coast, was made into long rafts formed of logs tied four abreast fastened with iron chains, containing sometimes 200 logs and towed at the rate of about two miles an hour to Port Blair. On several occasions in rough weather during 1905 these rafts broke up and at different times 192 logs, mostly padouk, got adrift and have not been recovered up to date. Two boats were swamped on different occasions while being towed behind a launch owing to sudden squalls.

40. The Steam Timber boat *Rosamond* was completed and brought into use before the close of the year. She will carry from 120 to 150 logs per trip and could if required do two trips a week. The crew, having become expert at handling logs, can load or unload at the rate of twenty logs per hour. As the *Rosamond* can unload direct on the Chatham jetty, subsequent lifting by crane from the water to the Mill is obviated. It is probable that in calm weather the *Rosamond* could easily tow a raft of over 400 logs in addition to what she can take in her hold. There are always some logs of all species (other than Didu) which will not float and these have always been a difficulty in rafting but are easily handled with the *Rosamond*.

41. *Depôts.*—A beginning was made before the end of the year to establish a dry depôt for timber on Chatham. It is difficult to procure an even supply of any one kind of timber for which there may be a demand as there is often a preponderance of one species in a big camp which must be extracted before the camp is moved on. It is therefore a necessity to have depôts of some kind. Up to the present the depôt in Port Blair harbour has been located at Haddo where logs have been kept within reach of the tide. The result of this has been that it has been impossible to keep the logs in a uniform manner owing to their moving about daily at every tide and logs become so encrusted with weeds in a short time that marks soon get

unrecognizable. Any logs of species other than padouk log begin to get bored after three months' immersion in sea water and after ten months are so badly infected with Teredo as to be only fit for firewood. Padouk begins to get bored after six months' immersion and is badly damaged after a year. Logs left in forest depôts even above the reach of the tide if not looked after, deteriorate though at nothing like the same rate as logs within tidal influence. The completion of the *Rosamond* having set free the launch used for towing, a start was made in clearing all the old depôts round the coast. Some of these contained logs which had been cut previous to 1892 and which being completely shaded by heavy secondary growth were kept continually moist. Rot had set in to such an extent that with the exception of some padouk logs and squares the bulk of the timber was only fit for fuel.

42. *Saw Mill.*—The Chatham Saw Mills were removed from the charge of the Deputy Conservator of Forests. The old system by which the mill is paid by the Forest Department for all the wood sawn up still obtains, as also the system under which the local Public Works and Marine Departments pay for timber in the scantling after it has been sawn up. The procedure of selling timber in the log to the Saw Mill would no doubt be simpler, but it must be remembered that many logs brought to the mill are imperfect, frequently containing heart shakes, hollows, buttresses, etc., which would be rejected by the Saw Mill if they had to be paid for in the log but which often yield 30 or 40 per cent. of good scantling. The trees from which these have been extracted would not improve by being left to grow in the forest. A small quantity of wood was, in the early part of the year, sawn up in the mill into scantling for export from time to time, but Government having ordered that no timber for export was to be sawn up in the mill, this has been discontinued.

Hand Sawing operations.

43. As there are a number of old padouk trees in the vicinity of the Settlement which for various reasons were not removed when the land on which they stand was forest at the time when the felling operations were in progress, it was determined to see whether these could not be exploited by being sawn up into slabs and removed in the manner in which Gurjan timber has been exploited by free residents on a small scale for some years. A commencement was made early in 1906, and there is no doubt that in spite of costly and bad sawing and hand dubbing which is necessary before they can be imported into America, there will be a good margin of profit. Arrangements were also made to saw up by hand logs brought to the Saw Mill which are too hollow or imperfect for the American market but at the same time of good colour. These were previously being sawn up in the mill. Outside labour, *i.e.*, labour other than convict labour is very expensive and sawing done by ticket of leave men is very wasteful. The result is that hand-sawn timber costs about Rs. 60 a ton as compared with Rs. 30 a ton for mill-sawn timber and has a far rougher appearance for the market than the latter and though small quantities have been sold the buyers show a decided preference for the mill-sawn timber. The total value of disposals of timber amounted to Rs. 5,50,827.

44. Fuel, gurjan oil and mangrove bark were removed departmentally and supplied to the Settlement. The total value of fuel sold amounted to Rs. 29,087 and of minor produce, chiefly gurjan oil, to Rs. 7,041.

(ii) Purchasers.

45. Small quantities of Gurjan timber are removed by purchasers who cut up the trees in the forest into slabs which are then dragged to the road-side by buffaloes from which they are lifted into carts and transported to Port Blair, from whence they are shipped to Calcutta and Madras in the mail steamer. The sawing is done by free labour, and at the rates now being paid it is understood that a good sawyer can earn about Rs. 2 a day. The royalty on timber extracted amounted to Rs. 3,262. Very small quantities only of bamboos and minor produce were removed by purchasers, the total values being Rs. 303.

(iii) Rights and privileges.

46. None.

(iv) Free grants.

47. Free grants of poles of inferior species and minor produce were made to the Settlement and free residents and self-supporters. The total value of such grants amounted to Rs. 13,846.

(c) *Outturn and sources of Forest Produce.*

Forms 62 & 63

48. The following table compares the outturn of the year according to the agency of exploitation and the kind of produce extracted with the figures of 1904-05 :—

		Timber.	Fuel.	Bamboos.	Minor produce.
		C. ft.	C. ft.	No.	Rs.
Government	1905-06	606,198	605,450	10,000	7,084
	1904-05	493,001	789,293	40,270	6,776
Purchasers	1905-06	34,370	...	20,400	191
	1904-05	32,643	393	47,200	487
Free Grantees	1905-06	29,745	237,920	396,600	2,529
	1904-05	28,275	247,405	377,000	2,403
District Officers	1905-06	147,664	27,615	364,905	464
	1904-05	113,816	211,543	418,451	324
Total	1905-06	817,977	870,985	791,905	10,268
	1904-05	667,735	1,248,634	882,921	9,990

The increase in the outturn of timber is due to improved methods of rafting, enabling larger rafts to be brought to Port Blair Harbour. There was also a slightly better demand for Gurjan timber by local traders.

Export of timber.

49. The following statement shows the species, number and volume of logs exported during the year under report compared with those exported during 1904-05 :—

	1905-06.				1904-05.			
	Logs.	Squares.	Scantlings.	Total.	Logs.	Squares.	Scantlings.	Total.
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Padouk	174,203	...	15,255	189,458	202,449	...	4,432	206,881
Koko	...	1,525	...	1,525	684	...	2,040	2,724
Pyinma	1,947	10,109	...	12,056	...	4,797	236	5,033
Black Chuglam . . .	125	548	...	673	...	...	208	208
White Chuglam . . .	346	...	...	346	551	259	502	1,312
Toung peing . . .	123	...	95	218	...	...	518	518
Red Bombway . . .	...	...	...	...	526	...	5,496	6,022
Didu	2,158	...	2,904	5,062	996	518	9,239	10,753
Gurjan	...	...	280	280	531	...	9,200	9,731
Thingan	...	...	...	...	...	32	...	32
Mohwa	...	...	...	...	...	...	40	40
TOTAL .	178,902	12,182	18,534	209,618	205,737	5,606	31,911	243,254

50. The following shows the outturn of timber supplied to the Saw Mill in the log with the corresponding outturn received from the saw mill compared with the results of working in 1904-05 :—

Year.	TIMBER SENT TO SAW MILL.		Timber received from Saw Mill.	Percentage of waste.
	No. of logs.	Volume.		
		C. ft.	C. ft.	
1905-06	6,322	294,063	127,626	58
1904-05	6,355	335,768	139,932	56

51. The wastage is high owing to a large number of logs being (*a*) over-mature and (*b*) containing big buttresses which affect the measurement. The latter is due to trees being cut low down near the root. There are signs in past year's workings of stumps cut at from 6 to 12 feet from the ground, a somewhat wasteful method due probably to want of labour during the time the Cellular Jail was under construction. Buttresses are found mainly on old padouk and pyinma trees.

52. There was a decrease in the quantity of padouk exported owing to unfavourable weather for rafting. There was an increase in the quantity of pyinma sold for dockyard requirements and a decrease in the export of both Didu and Gurjan.

53. The rate in force for Didu logs is somewhat high, and as these logs are invaluable for keeping other more valuable logs afloat in rafts, they can be put on the market at a low rate without loss.

54. Three thousand seven hundred and thirty-eight tons of padouk logs and scantlings were shipped in compliance with the three-year contract for 12,000 tons commencing 1st January 1904. Of this amount, 7,690 tons had been sold leaving a balance of 4,310 tons to be supplied to complete the contract.

55. The timber from the Chatham Saw Mill was disposed of as follows:—

To whom supplied.	Padouk.	Others.	Total.
	Tons.	Tons.	Tons.
Settlement	853	877	1,730
Messrs. Gillanders, Arbuthnot & Co.	311	90	401
„ Turner, Morrison & Co.	7	...	7
„ Jessop & Co.	...	19	19
The Calcutta Mint	...	42	42
Sent to London	...	6	6
Local public	69	56	125
Outside public	3	2	5
Used departmentally	105	102	207
TOTAL	1,348	1,194	2,542
TOTAL FOR 1904-05	1,125	1,606	2,731

The padouk sawn up and exported was derived from hollow trees of good colour which were not fit for export in the log.

56. The number of trees felled and the volume of timber extracted compares with the figures of last year as follows:—

Year.	NUMBER OF TREES FELLED.			Volume of timber extracted.	
	Padouk.	Other.	Total.		
				C. ft.	Tons.
1905-06	3,809	2,280	6,089	606,198	—12,124
1904-05	3,814	1,949	5,763	493,001	+ 9,860
DIFFERENCE	—5	+ 331	+ 326	+ 113,197	+ 2,264

These differences do not call for any special comment.

Removal of produce by purchasers.

57. The following statement compares the quantities and values of the produce removed during the year under report as compared with 1904-05 :—

	Year 1904-05.		Year 1905-06.	
	Quantity.	Value.	Quantity.	Value.
		Rs.		Rs.
Timber . . . . . Tons.	653	2,264	684	3,249
Fuel . . . . . C. ft.	393	3	...	...
Bamboos . . . . . No.	47,200	59	20,400	26
Canes . . . . . „	73,600	46	9,600	6
Canes with roots . . . . . „	40,000	50	...	...
Thatching leaves . . . . . Bdls.	6,256	391	2,947	185
Total value .	...	2,813	...	3,466

There was a slight increase in the outturn of timber (Gurjan) which is exported to Calcutta, but the amount is limited by the small number of free sawyers and the high rates of wages demanded for their work.

58. *Fuel.*—The quantity of fuel extracted during the year was 7,568 cords which realized Rs. 30,272 as against 9,021 cords realizing Rs. 34,836 in 1904-05.

59. *Minor produce.*—The amount of Gurjan oil collected was 13,161 gallons, value Rs. 6,581, as compared with 12,831 gallons, value Rs. 6,415, collected in 1904-05.

One thousand one hundred and ninety maunds of Mangrove bark were collected and supplied yielding a revenue of Rs. 483 as compared with 1,000 maunds collected in 1904-05 realizing Rs. 250.

There appears to be a market for cane in Calcutta and 50 bundles were shipped before the close of the year. It is too early to say what profit can be expected from this source at present.

60. The total expenditure incurred under Management of State Forests was Rs. 3,49,756.

Chapter III.

Financial Results.

61. The Revenue and Expenditure of the year under report compares with the figures of the year 1904-05 and the average of the last five years as follows :— Forms 67 & 71

Year.	Revenue.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
1905-06	586,295	349,756	236,539
1904-05	595,354	347,511	247,843
Average of last five years	387,833	253,140	134,693

All except Rs. 10,268 of the Revenue for the year was derived from the sale of major forest produce and Rs. 5,72,765 or 97 per cent. of the total revenue was derived from the sale of timber extracted from the forests departmentally. The slight falling off in revenue from last year is attributed to rough weather during the monsoons of the year 1905—which not only stopped rafting work at times but caused the loss of logs which got loose when rafts broke up.

62. The expenditure for 1905-06 compares with that for 1904-05 as follows :—

	1905-06.	1904-05.
	Rs.	Rs.
Exploitation	1,62,015	1,58,546
Purchase and upkeep of live-stocks, tools, etc.	1,21,086	1,21,945
Roads, tramways and buildings ...	2,809	20,357
Organization and improvement ...	20,857	3,756
Establishment	35,339	34,696

The differences in the two years occur under the last two items.

In 1904-05 over Rs. 17,000 was spent on the construction of the new steam tramway with permanent stone bridges and culverts, while during 1905-06 a sum over Rs. 16,000 was spent on the collection of data for drawing up a working-plan for the forests in the North Andamans.

63. The exploitation charges amount to 46 per cent. of the total expenditure, but if the charges incurred for the purchase of live-stock, tools and plant, the bulk of which are due to the purchase, feed and keep of elephants and the construction of the Steam Timber Boat *Rosamond*, they actually form 81 per cent. of the total expenditure.

The expenditure on communication and buildings comprises less than 1 per cent. of the total expenditure and on organization and improvement only 6 per cent.

The expenditure on Establishment comprises only 10 per cent. of the total expenditure of the Establishment, 85 per cent. were on account of Administrative charges and 15 per cent. on account of Executive charges. There is no protective staff.

The percentage of expenditure to revenue is 59 per cent. as compared with 58 last year ; that of surplus to gross receipts is 40 as compared with 41 last year and 39 in 1903-04.

64. Form 65 shows the value of the timber, etc, on hand at the commencement and close of the year. There is an increase in the stock of logs of 1,974 logs measuring 76,595 cubic feet. This stock is being converted in the Saw Mill into sawn timber. Under the orders of the Chief Commissioner a stock of 1,500 tons or 75,000 cubic feet is to be kept in hand for seasoning purposes for the use of the Settlement. This will necessitate the bringing to depôt of about 180,000 cubic feet of timber or some 5,000 logs in addition to the normal local consumption of timber in the Settlement.

If the difference in value of the stock in hand, Rs. 80,912, be added to the revenue for the year, there will be a balance in favour of the year in revenue of Rs. 71,853 and in surplus of Rs. 69,608 as compared with the year 1904-05.

CHAPTER IV.

ADMINISTRATION.

65. Mr. J. H. Lace, Conservator of Forests, Pegu Circle, inspected this Division between the 26th and 28th April 1906, and his report as usual was forwarded to the Chief Commissioner.

Mr. B. B. Osmaston, Deputy Conservator of Forests, held charge of the Division up to the 24th March and the writer from that date up to the end of the year.

Mr. F. H. Todd, Deputy Conservator of Forests, Burma, was deputed for seven months to make a working-plan for the North Andaman island. He was assisted by Mr. Rencontre, Extra Assistant Conservator of Forests.

Mr. G. T. Wrafter, Extra Assistant Conservator of Forests, was in charge of the Northern Sub-Division and his local knowledge was of great assistance.

Mr. M. C. C. Bonig was appointed Extra Assistant Conservator of Forests with effect from the 23rd August 1905. His technical knowledge of ship building and handling timber was of considerable value in connection with the construction and navigation of the *Rosamond* and transport of logs by water generally.

66. The following statement shows the average daily strength of the labour gangs on the various forest works in progress:—

	Present on work.	Sick in hospital.	Self-supporters.	Total.
Timber extraction	574	122	126	822
Plantation and Cultural operations	59	10	1	70
Wimberley Ganj Steam Tramway construction	55	9	...	64
Steam Timber boat *Rosamond* construction	52	8	106	166
Firewood extraction	121	...	...	121
Gurjan oil collection	42	...	...	42
Total	903	149	233	128

CHAPTER V.

GENERAL.

67. No new buffaloes were purchased and there were no casualties. The stock of these animals on hand is 32.

68. The *Rosamond* was completed during the year and made her first trip for logs on the 12th June 1906.

69. The steam launch *Ross* was borrowed from the Settlement in place of the *Eileen*. The former is a larger boat and has far more powerful engines and can tow a larger number of logs and in rougher weather than the *Eileen* which however can tow lighters, etc., in the harbour in Port Blair as well as any other launches.

70. A convict Mahout was killed by Jarawas being shot with an arrow through the heart.

F. TRAFFORD,
Deputy Conservator of Forests,
Andamans.

PORT BLAIR;
The 15th September 1906.

Annual Form No. 51—[*Prescribed*].

(*Vide* paragraph 1).

Area of Reserve Forests, Protected Forests and Unclassed State Forests and waste lands for the Forest year 1905-06.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1905. Acres.	Area on 1st July 1905. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 30th June 1906. Acres.	Area on 30th June 1906. Equivalent in square miles.	No. and date of notification of addition or transfer, etc.	Remarks.
			Reserved Forests.								
Andamans	. .	Andamans.	1. Navy Bay Padouk Plantation Reserve.	10	0·04	...	...	10	0·04	...	These forests have been simply declared "Reserved Forests" in the Local Official Gazette in accordance with the policy enunciated by the Inspector-General of Forests in his "suggestions" of 1891.
			2. Navy Bay Teak Plantation Reserve.	16				16			
			3. All Musjid Reserve .	14,916	23·	...	...	14,916	23·	...	
			4. Mount Harriet Reserve.	28,800	45·	...	...	28,800	45	...	
			5. Brigade Creek Reserve	2,344	3·66	...	...	2,344	3·66	...	
			6. Dhani Khari Reserve .	8,045	12·57	...	...	8,045	12·57	...	
			7. Hope Town Reserve .	415	0·65	...	...	415	0·65	...	
			8. Shoal Bay Reserve . .	9,728	15·20	...	...	9,728	15·20	...	The Indian Forest Act is not in force in the Andamans.
			9. Port Meadows Reserve	12,160	19·00	...	...	12,160	19·00	...	
			10. Middle Strait Reserve.	23,411	36·58	...	...	23,411	36·58	...	
				99,845	156·00	...	...	99,845	156·00	...	
			Protected Forests. *Nil.*								
			Unclassed State Forests and Waste Lands.								
				11,48,856	1,795	...	*816	11,48,540	1,795	...	* These areas were cleared for cultivation by the Settlement.
			Total . .	...	...	...	...	...	1,951	...	

Form No. 52.

(*Vide* paragraph 2).

Statement showing the progress made in, and the expenditure incurred on, Forest Settlements during 1905-06.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year. Sq. Ms.	Areas finally settled during the year. Number and date of Government order according final sanction to the Settlement.	Name of Forest settled.	Area, in square miles.	Expenditure incurred during the year on areas finally settled. In Forest accounts.	Expenditure incurred during the year on areas finally settled. In other accounts.	Entire cost per square mile of area finally settled during the year.	Areas undergoing settlement. At commencement of the year. Name of tract.	Areas undergoing settlement. At commencement of the year. Area, in square miles.	Areas undergoing settlement. Taken in hand during the year. Name of tract.	Areas undergoing settlement. Taken in hand during the year. Area, in square miles.	Expenditure incurred during the year on areas undergoing Settlement. In Forest accounts.	Expenditure incurred during the year on areas undergoing Settlement. In other accounts.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						Rs.	Rs.	Rs.					Rs.	Rs.	
Andamans .	Andamans	156	...	...	...	...	...	...	...	...	...	...	...	...	...

Form No. 53.

(*Vide* paragraph 3).

Record of Demarcation and Maintenance of Boundaries, 1905-06.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries not demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarkation during the year.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans ...	...	...	42	42	29	116	187	...	...	

N. B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub-divisions, such as blocks, compartments, coupes.

Form
(*Vide*
Statement of Forest areas surveyed and under

Division.	Areas surveyed and under															
	Special surveys—Maps on 4" scale or over, by Survey of India Department or Forest Survey Branch.								*Ordinary, included in District Surveys.*							
	WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.		
	With details of growing stock.		Without details of growing stock.		Total cost.	Previous.	Of the year.	Total cost.	With details of growing stock.		Without details of growing stock.		Total cost.	Previous.	Of the year.	Total cost.
	Previous.	Of the year.	Previous.	Of the year.					Previous.	Of the year.	Previous.	Of the year.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.
Andamans ...	...	...	166	...	...	...	...	...	248	...	1,951	...	...	...	...	...

Form
(*Vide*
Progress made in Work-

Division.	Areas for which Working-Plans have been completed.		Areas for which Working-Plans are being compiled.	
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.
1	2	3	4	5
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.
Andamans	...	...	...	...

Form
(*Vide*
Communication and

Division.	New work undertaken during the year.					
	Buildings.		Roads and Paths.			Total Expenditure on new work.
	Description of Building.	Expenditure incurred.	Road or path and object of the same.	Length of Road or Path.	Expenditure incurred.	
1	2	3	4	5	6	7
		Rs.		Miles.	Rs.	Rs.
Andamans ...	Constructing rest-house.	185	Construction of Steam Tramway, Wimberley.	...	1,439	...
"	Constructing 3 police guard houses.	18				
	Constructing one forester's quarters.	17				
	Blacksmith's shop extended.	6				
	Constructing temporary convict barracks.	582				
	Total ...	808			1,439	2,247

No. 54.

paragraph 4.)

Survey during the year 1905-06.

survey during the year.													
Chain and compass or other surveys by local officers.										COST.			
WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			Areas remaining to be taken under survey.	Total Forest area at end of the year, as per Form No. 46.	Previous.	Of the year.	Entire cost of all Surveys to end of the year.	REMARKS.
4-INCH OR OVER.		UNDER 4-INCH.		Total cost	Previous.	Of the year.	Total cost.						
Previous.	Of the year.	Previous.	Of the year.										
18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Rs.	Rs.	
...	...	...	...	...	...	...	...	...	1,951	(a)	...	...	(a) Not accurately known. The cost of the Andamans survey is not known.

No. 55.

paragraphs 5 to 8.)

ing-Plans, 1905-06.

Areas for which Working-Plans have still to be taken in hand.	Total Forest area, as in Form No. 51.	Entire cost, per square mile, of Working-Plans completed.	REMARKS.
6	7	8	9
Sq. Ms.	Sq. Ms.	Rs.	
1,951	1,951	...	Reserved Forests, 156 square miles, Unclassed State Forests, 1,795 square miles.

No. 56.

paragraphs 9 to 15.)

Buildings, 1905-06.

REPAIRS EXECUTED DURING THE YEAR.						
BUILDINGS.		ROADS AND PATHS.			Total expenditure on repairs.	REMARKS.
Nature of Repairs.	Expenditure incurred.	Nature of repairs.	Length repaired.	Expenditure incurred.		
8	9	10	11	12	13	14
	Rs.		Miles.	Rs.	Rs.	
Repairs to temporary convict barracks.	539	Repairs to steam tram road.	...	*7,545	...	*Charged to A. I. A.
Repairs to subordinates, quarters.	23					
	562			7,545	8,107	

Form No. 57.

(*Vide* paragraph 16.)

Register of breaches of Forest Rules during 1905-06.

Forest Division.	Cases pending from 1904-05.	New cases of the year.					Total cases.	Disposed of during the year.						Cases pending at close of year.	Remarks.
								Convictions.		Acquittals.		Total.			
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Cases.	Persons.	Cases.	Persons.	Cases.	Persons.		
Andamans	...	...	1	...	...	1	1	1	1	...	...	1	1	...	
Grand Total. A 1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Grand Total. B ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Grand Total. C ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

N. B.—A means cases taken into Court.
B means cases disposed of under section 67 of Indian Forest Act, 1878.
C means undetected cases.

Form No. 59.

(*Vide* paragraph 19.)

Area closed and open to Grazing during 1905-06.

Division.	Area in square miles.						Remarks.
	Closed to all animals.		Closed to browsers (camels, goats or sheep).		Open to all animals.	Total area.	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.		
1	2	3	4	5	6	7	8
Andamans	155·66	...	*Reserved Forests.*				
			...	...	0·04	156	
			Protected Forests.				
			Nil				
			Unclassed State Forests.				
			...	...	1,795	1,795	

Form No. 61.

(*Vide* paragraphs 21 to 28.)

Artificial reproduction.

Species.	Locality.	Area in acres.				Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
		On 1st July 1905.	Added during the year.	Excluded during the year.	Area on 30th June 1906.	Creation.	Upkeep.	Creation.	Upkeep.			
1	2	3	4	5	6	7	8	9	10	11	12	13
						Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
					Regular plantations.							
Teak	Navy Bay	10	...	...	10	...	...	...	...	...	...	Old plantation, cost unknown.
Mahogany	Namunaghar	1	...	...	1	...	2	...	...	...	...	
Padouk	Do.	2	...	...	2	...	...	...	...	...	...	
Do.	Bindraban	102	...	...	102	...	560	714	560	...	...	Planted 1905.
Para rubber	Namunaghar	1	...	...	1	...	70	18	70	...	...	
					Toungya plantations.							
Padouk	Goplakabang	177	170	...	347	2,969	328	4,877	1,666	...	...	Expenditure on 64 acres old plantation unknown. Includes 97 acres of teak and padouk area under cultural operations.
Para rubber	Do.	...	30	...	30	181	...	181	...	...	...	Cost of making nurseries, cleaning and stailing out area only.
					Cultural operations.							
Mangrove	Brigade creek	344	...	...	344	...	434*	...	...	...	...	Original cost unknown.
	Dhani Khari	226	...	...	226	...	96*	...	...	...	...	*Cost of filling blanks.
Padouk and Teak mixed.	Goplakabang	97	...	97	...	...	...	...	...	...	...	Absorbed into Toungya area above.
	Total	960	200	97	1,063	3,150	1,490	5,790	2,296	...	...	

Form
(Vide

Outturn (in cubic feet, solid) of Timber and Fuel during the

Division.	Timber in the rough; Logs.					Timber in the rough; Poles.					Sawn or square Timber.				
	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	District officers.	Total.	Government.	Purchasers.	Free Grantees.	Right-holders.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
											I.—Reserved Forests.				
Andamans .	58,252	* 8,555	...	...	66,807	400	50	† 9,915	28,316	38,681	1,452	...	...	...	1,452
Total .	58,252	8,555	...	...	66,807	400	50	9,915	28,316	38,681	1,452	...	...	...	1,452
											II.—Protected Forests.				
											Nil				
Total .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
											III.—Unclassed Forests.				
Andamans .	491,229	* 25,665	...	...	516,894	6,100	100	† 19,830	119,348	145,378	§ 48,765	...	...	...	48,765
Total .	491,229	25,665	...	...	516,894	6,100	100	19,830	119,348	145,378	48,765	...	...	...	48,765
Grand Total.	549,481	34,220	...	...	583,701	6,500	150	29,745	147,664	184,059	50,217	...	...	...	50,217

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it being
In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals*

No. 62.

paragraph 48.)

year 1905-06 and Agency of Exploitation.

Miscellaneous.					Fuel.					Total Outturn.	Remarks.
Government.	Purchasers.	Free Grantees.	Right-holders.	Total.	Government.	Purchasers.	Free Grantees.	District officers.	Total.		
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	...	c. ft.	c. ft.	c. ft.	c. ft.	
...	...	...	...	...	215,680	...	‡ 47,584	27,615	290,879	397,819	*Actual.
...	...	...	...	...	215,680	...	47,584	27,615	290,879	397,819	†An estimate based on numbers of free grantee's huts 100 bullies = five cubic feet and two posts = ten cubic feet are allowed for each house.
											‡There are 1,983 householders and quantity of fuel removed per house is estimated at 1½ cords per annum, one cord = 80 cubic feet solid.
...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	389,770	...	‡ 190,336	...	580,106	1,291,143	§Logs squared with axe.
...	...	...	...	...	389,770	...	190,336	...	580,106	1,291,143	
...	...	...	...	...	605,450	...	237,920	27,615	870,985	1,688,962	

entered in cubic feet solid.

and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 63—[*Prescribed.*]

(*Vide* paragraph 48.)

Outturn of Minor Forest Produce during the year 1905-06.

Description of Produce.	Produce removed or utilized.										Remarks.
	By Government Agency.		By Purchasers.		By Free Grants.		By District Officers.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12
		Rs.		Rs.		Rs.		Rs.		Rs.	
					I.—Reserved Forests.						
Bamboos . . No.	...	...	15,100	19	132,600	165	30,260	38	177,960	222	These entries in columns Nos. 6 and 7 are *estimates* based upon the following data:—1,983 self-supporters and free residents' houses, each of which is allowed—200 bamboos, 40 canes, 40 bundles thatching leaves. } Annually.
Canes . . „	4,680	3	8,600	5	26,520	17	11,650	7	51,450	32	
Canes with roots . „	...	...	...	...	...	...	...	...	...	...	
Thatching leaves . Bdls.	...	...	1,851	116	13,260	829	1,205	75	16,316	1,020	
Bark . . . lbs.	...	...	...	...	...	...	...	...	...	...	
Total .	...	3	...	140	...	1,011	...	120	...	1,274	All the other figures are actuals.
					II.—Protected Forests. *Nil.*						
					III.—Unclassed State Forests.						
Bamboos . . No.	10,000	12	5,300	7	264,000	330	334,645	418	613,945	767	In addition canes exported were taxed and a further sum of Rs. 88 so realized.
Canes . . „	640	1	1,000	1	52,800	33	469,745	293	524,185	328	
Thatching leaves . Bdls.	260	16	1,096	69	26,400	1,650	1,434	89	29,190	1,824	
Gurjan oil . . lbs.	105,291	6,581	...	...	...	...	...	...	105,291	6,581	
Bark . . . „	95,225	483	...	...	...	...	...	...	95,225	483	
Total .	...	7,093	...	77	...	2,013	...	800	...	9,983	
Grand Total .	...	7,096	...	217	...	3,024	...	920	...	11,257	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 64.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally, or otherwise disposed of, during the year 1905-06.

Name of Division.	Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
Andamans	*Padouk.* 75,154	470,201	545,355	424,088	121,267
	Koko. 1,660	25,716	27,376	22,398	4,978
	Chuglam black. 3,003	7,633	10,636	9,965	671
	Pyimma. 3,508	73,647	77,155	63,117	14,038
	Marble wood. 35	1,154	1,189	368	821
	Satin wood. 138	94	232	46	186
	Other timber. 26,661	143,541	170,202	135,203	34,999
	Firewood. 39,725	605,450	645,175	608,295	36,880
Total .	149,884	1,327,436	1,477,320	1,263,480	213,840

Annual Form No. 65—[*Prescribed.*]

(*Vide* paragraph 64.)

Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1905-06.

Description of Timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in Value.		Remarks.
	No.	C. ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
			Rs.			Rs.	Rs.	Rs.	Rs.
Logs	2,594	80,892	80,729	4,568	157,487	1,69,860	89,131	...	For . . 89,159
Planks . . .	...	29,267	28,074	...	19,473	19,827	...	8,247	Against . 8,247
Firewood . .	...	39,725	1,816	.	36,880	1,844	28	...	For . . 80,912
Total . .	2,594	149,884	1,10,619	4,568	213,840	1,91,531	89,159	8,247	

Annual Form No. 66—[*Prescribed.*]

Abstract showing the Value of Live and Dead Stock for the year 1905-06.

Description of Live and Dead Stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in Value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
		Rs.		Rs.	Rs.	Rs.	
Elephants ...	41	66,789	48	1,04,000	37,211	...	One elephant "Malatoo" belonging to the Settlement but used by Forest Department, not included in the list. Seven elephants were purchased during the year.
Buffaloes ...	32	501	32	1,200	699	...	Rinderpest has caused a rise in the price, but in any case the buffaloes could easily be sold at Rs. 40 each on the average.
Boats, timber towing	23	12,729	22	12,100	...	629	One boat sunk.
Lighters ...	2	2,446	2	2,300	...	146	
Carts, small ...	2	33	2	30	...	3	
Crane	1	271	1	260	...	11	
Portable tramway ...	25¾ miles, 1 locomotive, 100 trucks 5 trollies,	1,48,922	25¾ miles, 1 locomotive, 98 trucks, 5 trollies.	1,37,000	...	11,922	Rs. For ... 95,327 Against ... 14,272 For ... 81,055
Office furniture ...	...	326	...	360	34	...	
Miscellaneous stores, axes, dahs, winches, etc.	...	14,965	...	20,000	5,035	...	
Dingy	2	130	2	120	...	10	
Forester's boat ...	1	138	1	130	...	8	
Steam timber boat *Rosamond.*	1	73,652	1	1,23,000	49,348	...	
Steam launch *Eileen*	1	14,945	1	14,000	...	945	
Jolly boats ...	3	627	2	400	...	227	One boat sunk.
Buildings ...	...	5,371	...	5,000	...	371	
Butting Saw Engine and Steam Winch.	...	...	1	3,000	3,000	...	
Total ...	...	...	...	4,22,900	95,327	14,272	

Form No. 67—[*Prescribed.*]

(*Vide* paragraph 61.)

Summary of Revenue of the Andamans Division during 1905-06.

REVENUE.

	Rs.	As.	P.
I.—Timber and other produce removed from the Forests by Government agency—			
a. Timber	5,42,305	0	0
b. Firewood and charcoal	30,460	0	0
c. Bamboos	.....		
d. Sandal-wood	.....		
e. Grass and other minor produce	8,226	0	0
Total I	5,80,991	0	0
II.—Timber and other produce removed from the Forests by consumers or purchasers—			
a. Timber	3,262	0	0
b. Firewood and charcoal	.....		
c. Bamboos	25	0	0
d. Grazing and fodder Grass	.....		
e. Other minor produce	278	0	0
f. Forest stamps	.....		
g. Other items	.....		
h. Commutation fees	.....		
Total II	3,565	0	0
III.—Drift and waif wood and confiscated forest produce	.....		
Total III	.....		
IV.—Revenue from Forests not managed by Government—			
a. Duty on foreign timber and other forest produce	.....		
b. Revenue from shared and private forest	.....		
Total IV	.....		
V.—Miscellaneous—			
a. Fines and forfeitures	.....		
b. Refunds	300	0	0
c. Other sources	1,439	0	0
Total V	1,739	0	0
Grand Total Revenue	5,86,295	0	0

Form No. 67—[*Prescribed.*]

(*Vide* paragraphs 61 to 63.)

Summary of Expenditure of the Andamans Division during 1905-06.

EXPENDITURE.

A.—CONSERVANCY AND WORKS.

	Rs.	As.	P.
I.—Timber and other produce removed from the Forests by Government agency—			
a. Timber	1,45,962	0	0
b. Firewood and charcoal	12,158	0	0
c. Bamboos	.....		
d. Sandal-wood	.....		
e. Grass and other minor produce	3,895	0	0
Total A. I.	1,62,015	0	0

EXPENDITURE—*concld.*

A.—CONSERVANCY AND WORKS—*contd.*

	Rs.	As.	P.
II.—Timber and other produce removed from the Forests by Consumers or Purchasers	.....		
Total A. II .	.....		
III.—Drift and wood and confiscated Forest Produce . . .	.....		
Total A. III .	.....		
IV.—Revenue from Forests not managed by Government—			
a. Duty on foreign timber and other forest produce	.....		
b. Revenue from shared and private forests	.....		
Total A. IV .	.....		
V.—Rent of leased Forests and payments to Shareholders in Forests managed by Government	.....		
Total A V .	.....		
VI.—Live Stock, Stores, Tools and Plant—			
a. Purchase of cattle	35,300	0	0
b. Feed and keep of cattle	42,855	0	0
c. Purchase of stores, tools and plant	42,931	0	0
Total A. VI .	1,21,086	0	0
VII.—Communications and Buildings—			
a. Roads and bridges	1,439	0	0
b. Buildings	1,370	0	0
c. Other works	.....		
Total A. VII .	2,809	0	0
VIII.—Organization, improvement and extension of Forests—			
a. Demarcation	.....		
b. Cost of Settlements; compensation for land and rights . . .	.....		
c. Surveys	.....		
d. Working-plans	16,217	0	0
e. Sowing and planting	4,640	0	0
f. Protection from fire	.....		
g. Other works	.....		
Total A. VIII .	20,857	0	0
IX.—Miscellaneous—			
a. Law charges	.....		
b. Other charges	7,650	0	0
Total A. IX .	7,650	0	0
Total A.—Conservancy and Works .	3,14,417	0	0

EXPENDITURE—*concld.*

B.—ESTABLISHMENTS.

	Rs.	As.	P.
I.—Salaries—			
a. Conservators	.....		
b. Superior officers	19,737	0	0
c. Subordinate forest and depôt establishments	4,281	0	0
d. Office establishments	3,139	0	0
e. Deputation and special allowances	2,664	0	0
f. Exchange compensation allowance	1,070	0	0
Total B. I	30,891	0	0
II.—Travelling Allowances—			
a. Conservators	.....		
b. Superior officers	2,789	0	0
c. Subordinate forest and depôt establishments	903	0	0
d. Office establishments	40	0	0
Total B. II	3,732	0	0
III.—Contingencies—			
a. Stationery	46	0	0
b. Carriage of tents and records	.....		
c. Rents, rates and taxes	.....		
d. Pay of police guards	.....		
e. Official postage	71	0	0
f. Sundries	599	0	0
Total B. III	716	0	0
Total B.—Establishments	35,339	0	0
Grand Total of Expenditure	3,49,756	0	0
Surplus	2,36,539	0	0

S. C. MITRA,
Deputy Comptroller, India Treasuries.

Calcutta;
The 20th September 1906.

Form No. 68 [*Prescribed.*]

Account Current for the Forest year 1905-06.

RECEIPTS.	Rs. As. P.	Rs. As. P.	PAYMENTS.	Rs. As. P.	Rs. As. P.
Cash Balance	.....	.....	I.—Refunds and Drawbacks ...	.....	.....
VIII.—Assessed taxes—			Expenditure as per annual summary form No. 67.	.....	3,49,756 4 10
Income Tax—Deductions from salaries ...		693 13 11	Forest Deposits	.....	.....
Revenue as per Annual Summary, form No. 67.	.....	5,86,295 7 3	Forest Advances	.....	40,015 5 2
XII.—Interest	.....	.....	Suspense Account	.....	5 0 0
Forest Deposits	.....	.....			
Forest advances	.....	40,198 10 8	Savings Bank Deposits—		
Supsense Account	.....				
			Bank Account—		
Service Funds—			Forest Officers' Provident Fund ...		
Uncovenanted Service Family Pension Fund, Bengal.			Cash Remittances—Local—Forest Remittances—		
Savings Bank Deposits—			Remittances to Treasuries ...	3,99,485 4 1	
Bank Account—			Unpaid cheques written back ...	.....	
Forest Officers' Provident Fund	2,223 0 0		Inter-divisional Transfers ...	.....	3,99,485 4 1
Special Account—					
General Family Pension Fund ...	420 0 9	2,643 0 0			
			Account Current with Foreign States—		
Cash Remittances—Local—Forest Remittances—			Berar Suspense Account ...	.....	.....
Forest cheques drawn ...	1,92,997 12 11		His Majesty's Colonial Government, Ceylon.	.....	.....
Revenue Remittances written back.	.....				
Inter-divisional Transfers ...	.....	1,92,997 12 11			
			Exchange Account with other Governments—		
Account Current with Foreign States—			Account between India and—		
Berar Suspense Account ...	.....		—Forest Remittances from—to—	.....	.....
His Majesty's Colonial Government, Ceylon.	.....		—Items adjustable by—	.....	.....
			Account between India and Burma—		
Exchange Account with other Governments—			—Forest Remittances from—to—		
Account between India and—			IV.—Items adjustable by Burma	4,377 14 8	.....
—Forest Remittances to—from—	.....		Account between India and Bengal		
—Items adjustable by— ...	.....		—Forest Remittances from—to—		
Account between—and—			IV.—Items adjustable by Bengal.	1,382 9 8	.....
—Forest Remittances to—from—	.....		Account between—and—		
—Items adjustable by— ...	.....		—Forest Remittances from—to—	.....	.....
Account between India and Burma			Account between—and—		
—Forest Remittances to—from—			—Forest Remittances from—to—	.....	.....
III.—Items adjustable by India	749 4 0		Account between—and—		
Account between—and—			—Forest Remittances from—to—	.....	.....
—Forest Remittances to—from—	.....		Account between—and—		
Account between—and—			—Forest Remittances from—to—		
—Forest Remittances to—from—	.....		Account between—and—		
Account between—and—			—Forest Remittances from—to—		
—Forest Remittances to—from—	.....		—Items adjustable by— ...	.....	.....
Account between India and Bengal			Account between—and—		
—Forest Remittances to—from—	.....		—Forest Remittances from—to—		
III—Items adjustable by India	38 11 9		—Items adjustable by— ...		5,760 8 4
Account between—and—					
—Forest Remittances to—from—	.....				
—Items adjustable by— ...	.....	787 15 9	Inter-Departmental transfers—		
			P. W. Department, Ordinary Branches.	.....	.....
Inter-Departmental Transfers—			P. W. Department, Railway Branch		
P. W. Department, Ordinary Branches.	22,739 11 9		Military Department, Bengal Command.		
„ „ Railway Branch.	.....		Military Department, Punjab Command.	.....	.....
Military Department, Eastern Command.	263 13 3		Military Department, Madras Command.		
Military Department, Secunderabad Division.	0 11 9		Military Department, Bombay Command.	.....	.....
Military Department, Madras Command.	.....		Telegraph Department ...		
Military Department, Bombay Command.	.....		Post Office Department ...		
Telegraph Department ...	.....		Marine Department	15,675 8 0	
Post Office Department ...	.....		Civil Departments	1,59,548 6 10	1,75,223 14 10
Marine Department	15,263 1 6				
Civil Departments	1,08,369 0 7	1,46,636 6 10	Cash Balance		6 14 1
Grand Total ...	.....	9,70,253 3 4	Grand Total ...	.....	9,70,253 3 4

CALCUTTA,

The 20th September 1906.

S. C. MITRA,
Deputy Comptroller, India Treasuries, Calcutta.

Form No. 69—[*Prescribed.*]

Revenue recesved and Outstandings on account of Revenue during 1905-06.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the Department at end of year.	Remarks.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
Andamans . .	Timber, Firewood and Gurjan oil, etc.	52,117 1 4	5,86,955 2 1	6,39,072 3 5	*5,82,255 4 10	56,816 14 7	*Rs. 1,263-15-7 written off on account of bills cancelled.
	Other Revenue . .	.....	5,304 2 0	5,304 2 0	5,304 2 0	.....	
	Total . .	52,117 1 4	5,92,259 4 1	6,44,376 5 5	5,87,559 6 10	56,816 14 7	

PORT BLAIR ;
The 20th September 1906.

F. TRAFFORD,
Deputy Conservator of Forests, Andamans.

Form No. 70—[*Prescribed.*]

Outstandings and Liabilities on account of Contractors and Disbursers for Forest year 1905-06.

Division.	Department Debtor.			Department Creditor.			Balance Due.	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Andamans . . .	.....	40,198 10 8	40,198 10 8	183 5 6	40,015 5 2	40,198 10 8	.....	.....
Total . .	.....	40,198 10 8	40,198 10 8	183 5 6	40,015 5 2	40,198 10 8	.....	.....

CALCUTTA ;
The 20th September 1906.

S. C. MITRA,
Deputy Comptroller, India Treasuries.

Form No. 71—[*Prescribed.*]

(*Vide* paragraph 67.)

Financial results of the year 1905-06.

Divisions.	Timber and other produce removed from the forests by Government Agency.		Other Revenue.		Formation, protection and improvement of forests.	Total.	
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Andamans . .	5,80,991	3,19,764	5,304	1,105	28,887	5,86,295	3,49,756
	5,80,991	3,19,764	5,304	1,105	28,887	5,86,295	3,49,756

PORT BLAIR ;
The 20th September 1906.

F. TRAFFORD,
Deputy Conservator of Forests, Andamans.

Appendix I.

Descriptive Roll of elephants in the Andamans Forest Division on the 30th June 1906.

Serial No.	Name of Elephants.	Sex.	Height.		Date of receipt.	Estimated age on 31st March 1902, or on date of receipt, if received later.	Present age.	Number of years elephant has been working.	Condition.	Number of days.			Cost price.	Remarks.
			Feet.	Inches.						At work.	At rest.	Sick.		
1	2	3	4		5	6	7	8	9		10		11	12
						Years.	Years.	Y. M.					Rs.	
1	Hannah ...	Female ...	7	3	Before July 1891	33	47	More than 15 0	Fair, strong ...	258	88	19	...	
2	Arnold (Tusker) ...	Male ...	8	6	Do. ...	41	55	Do. 15 0	Old	22	50	293	...	
3	Bhairon Pershad (Tusker).	Do. ...	7	9	December 1895 ...	32	43	Do. 10½ 0	Good, strong ...	282	83	...	3,488	
4	Australia ...	Female ...	9	1	Before March 1886	28	42	Do. 20 0	Do. ...	289	76	...	...	
5	Viper	Do. ...	7	9	Do. ...	36	50	Do. 20 0	Do. ...	247	86	32	...	
6	Lutchmi ...	Do. ...	7	¾	April 1891 ...	32	47	15 0	Poor, weak ...	280	71	14	3,025	
7	Sah Pah (Tusker)	Male ...	7	10	March 1894 ...	33	45	12 0	Fair, fairly strong	277	71	17	3,538	
8	Bhokaung (Tusker)	Do. ...	7	11½	Do. ...	36	48	12 0	Good, strong ...	252	78	35	4,083	
9	Shwe Daung (Tusker).	Do. ...	7	¾	Do. ...	34	46	12 0	Do. ...	266	87	12	3,238	
10	Paul (Tusker) ...	Do. ...	7	3	March 1895 ...	30	41	11 0	Do. ...	281	84	...	3,763	
11	Adulphas (Tusker)	Do. ...	7	3	Before March 1886	23	37	More than 20 0	Do. ...	250	79	36	...	
12	Page	Female ...	7	6	March 1894 ...	32	44	12 0	Do. ...	236	67	62	2,713	
13	Wellington (Tusker)	Male ...	8	4½	March 1895. ...	35	46	11 0	Do. ...	220	51	94	3,655	
14	Maxie	Female ...	6	1	Born in January 1886.	6	20	4 0	Do. ...	278	87	...	...	Commenced work on 1st July 1902.
15	Oswald (Tusker) ...	Male ...	5	5½	Before March 1886	40	54	More than 20 0	Poor, weak ...	251	104	10	...	
16	Aurangabad ...	Female ...	7	3	May 1892 ...	17	31	14 0	Good, strong ...	255	77	33	2,530	
17	Jangi Puri ...	Do. ...	8	2	April 1891 ...	27	42	15 0	Do. ...	256	75	34	3,025	
18	Kate	Do. ...	7	¾	Before March 1886	22	36	More than 20 0	Do. ...	288	77	...	...	
19	Sundri ...	Do. ...	7	1	Before July 1891 ...	56	70	15 0	Old and blind, weak	200	131	34	...	
20	Mahpah ...	Do. ...	7	6	March 1894 ...	31	45	12 0	Good, strong ...	216	73	76	2,813	
21	Behram (Tusker) ...	Male ...	7	10	December 1895 ...	28	39	10½ 0	Do. ...	124	41	200	3,355	
22	Goolabi ...	Female ...	7	8	March 1895 ...	40	51	11 0	Fair, fairly strong	251	69	46	2,605	
23	Diamond Jubilee...	Male ...	7	8	Born in August 1897.	5	9	...	Good, calf ...	...	...	...	...	
24	Nineteen hundred...	Do. ...	7	8	Born in January 1900.	3	7	...	Do. ...	...	...	...	...	
25	Mabel	Female ...	8	1	11th February 1902	28	32	4 4	Fair, weak ...	275	90	...	4,523	
26	Sooraj Mookhi ...	Do. ...	8	2	Do. ...	33	37	4 4	Fair, strong ...	170	49	146	4,523	
27	Lilly	Do. ...	8	2	Do. ...	30	34	4 4	Fair, fairly strong	294	71	...	4,523	
28	Raja Shee ...	Do. ...	8	3	Do. ...	35	39	4 4	Poor, weak ...	24	68	273	4,523	
29	Gulbadan ...	Do. ...	7	9	Do. ...	26	30	4 4	Fair, strong ...	235	70	60	4,523	
30	Rani	Do. ...	8	1	Do. ...	30	34	4 4	Good, strong ...	282	83	...	4,523	
31	Moti Mallah ...	Do. ...	7	6	Do. ...	25	29	4 4	Do. ...	295	70	...	4,523	
32	Delhi	Do. ...	7	8	Do. ...	26	30	4 4	Do. ...	235	63	67	4,523	
33	Meerut ...	Do. ...	7	10	Do. ...	27	31	4 4	Do. ...	245	72	48	4,523	
34	Bhola Nath (Tusker).	Male ...	8	2	28th January 1903	30	33	3 5	Do. ...	253	96	16	5,914	
35	Amir (Tusker) ...	Do. ...	8	...	Do. ...	28	26	3 5	Do. ...	251	79	35	5,915	
36	Gopal Das (Tusker)	Do. ...	8	7	Do. ...	25	28	3 5	Do. ...	257	73	35	6,215	
37	Lutchmi Pershad (Tusker).	Do. ...	8	1	Do. ...	30	33	3 5	Do. ...	285	75	5	6,415	
38	Sundah Pershad (Tusker).	Do. ...	8	8	Do. ...	25	28	3 5	Do. ...	262	80	23	5,915	
39	Singesur Pershad (Tusker).	Do. ...	8	11½	3rd January 1905	30	31	1 6	Poor, weak ..	17	12	336	6,464	
40	Jamna Pershad (Tusker).	Do. ...	9	3	Do. ...	27	23	1 6	Good, strong ...	223	82	60	6,464	
41	Ganga Pershad (Tusker).	Do. ...	7	11	Do. ...	25	26	1 6	Do. ...	211	81	73	6,464	
42	Panjey (Tusker) ...	Do. ...	8	7	26th April 1906...	28	28	0 2	Do. ...	6	60	...	6,312	
43	Lancer (Tusker)...	Do. ...	8	1	Do. ...	40	40	0 2	Do. ...	5	61	...	6,312	
44	Tupang (Tusker)...	Do. ...	7	7	Do. ...	28	28	0 2	Do. ...	12	54	...	6,312	
45	Fatch (Tusker) ...	Do. ...	8	...	Do. ...	38	38	0 2	Do. ...	15	51	...	6,312	
46	Kawal	Female ...	7	4	Do. ...	38	38	0 2	Do. ...	5	61	...	6,312	
47	Madhoo ...	Do. ...	7	7	Do. ...	23	23	0 2	Do. ...	5	61	...	6,311	
48	Akbar (Tusker) ...	Male ...	8	4	Do. ...	40	40	0 2	Dead	5	61	...	6,311	
									Total Days ...	9,146	3,327	2,422		

Port Blair;
The 20th September 1906.

F. TRAFFORD,
Deputy Conservator of Forests, Andamans.

No. 362—410-2 F., dated Calcutta, the 12th March 1907.

File No. 410 of 1906. Serial No. 2.

From—The Honourable Mr. E. D. Maclagan, I.C.S., Offg. Secretary to the Government of India, Department of Revenue and Agriculture.

To—The Superintendent of Port Blair.

I am directed to acknowledge the receipt of your letter No. 1854, dated the 12th October 1906, with which you forwarded the Forest Administration Report of the Andamans for the year 1905-06.

2. The Government of India observe that the year's working has been satisfactory, and they are glad to learn that the padauk plantations continue to be extended. Good work was done in regard to the exploration of the forests of the North Andaman Island and the compilation of a working-plan for these areas by Mr. F. H. Todd.

3. Pending the settlement of the larger questions involved in the management of the North Andaman forests, it will be necessary to arrange for the extraction of padauk from the South Andamans by Government Agency, and the Government of India trust that there will be no difficulty in continuing to dispose of the outturn at remunerative rates after the completion of the existing contract, tenders for short terms being invited from Indian firms, and delivery at Port Blair being insisted on as in the past.

No. 363—410-2 F.

Copy, with a copy of the Report, forwarded to the Home Department for information.

G. I. C. P. O.—No. 2442 R. & A.—21-3-1907.—220.—J. A.

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PROGRESS REPORT

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OF

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IN THE

ANDAMANS

FOR

1906-07.

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No. 1813-VII—22, dated Port Blair, the 20th September 1907.

From—Lieutenant-Colonel H. A. Browning, I. A., Superintendent of Port Blair,

To—The Secretary to the Government of India, Department of Revenue and Agriculture.

Sir,—I have the honour to submit, in original, letter No. C.C.-99, dated the 11th instant, from the Deputy Conservator of Forests, Port Blair, together with his Annual Report for the year 1906-07, with forms of appendices.

2. The report on the exploration of the forests in the South Andaman and adjacent localities by Mr. Rogers, Deputy Conservator of Forests, was printed during the year, but, as during the preparation of the report, much of the area visited by Mr. Rogers had been worked over for padouk, the information contained in it was brought up to date. Messrs. Todd and Rencontre of the Burma Forest Department, who were engaged last year in preparing working-plans of the North Andaman Island forests, returned to Burma on the 9th June 1906. Mr. Todd's working-plan and a final advertisement inviting tenders for the contract lease of the padouk in the North Andaman, Interview and Bennett Islands were published during the year.

3. The total length of the Wimberley Ganj steam tramway has been extended to eight miles and the locomotive makes three trips a day between Shoal Bay creek and Kadakachang. Seven and five-sixths miles of temporary tramway were laid and 6¼ miles taken up as being no longer required.

4. Mr. Osmaston's discovery of a large number of natural padouk seedlings has disproved the general opinion that natural reproduction of padouk was practically non-existent at least in the South Andaman. Artificial reproduction has been carefully attended to during the year and 225 acres were cleared, burnt and sown with padouk seed. Much damage was done by the wild pig and rat to the para rubber plantation, but precautionary measures have been adopted which will, it is hoped, prove effective. The seeds of the *ficus elastica* did not germinate, but the *afzelia palembanica* and *swietenia mahogani* seedlings are promising.

5. Considerable economy was effected during the year by utilising soft, instead of only hard, woods as fuel. Two classes of fuel have been constituted, the hard woods being classified as 1st class and the soft description as 2nd class. The former class is supplied for steam engines, brick and lime burning and the latter class for culinary and all other purposes. This is a decided step forward. The Taungya areas will in future not be burnt and it is believed that they will fully meet the demands of all kinds of fuel in the Settlement.

6. Six hundred and fifty-four thousand and fifty-five cubic feet of timber against 606,198 cubic feet last year were extracted during the year by Government agency, the increase being due to the extra facilities of transport afforded by the steam timber boat *Rosamond* which was able to bring in 1,000 tons of timber per mensem.

7. One elephant was purchased and one animal died during the year, the total number working at the close of the year being 43. The Deputy Conservator of Forests states that the *Rosamond* is an unqualified success. She carries a cargo of 120 tons and can do two and even three trips in a week. Owing to the severe straining she received while being launched, she will have to be sent to Calcutta shortly to be docked and repaired.

8. The surplus (Rs. 3,34,365) of revenue over expenditure is nearly a lakh more than that (Rs. 2,36,539) of last year and is due to more padouk having been extracted and to decrease in expenditure owing to the steam timber boat *Rosamond* having been completed and paid for in the year previous.

9. Proposal for bringing the crew of the *Rosamond* on the permanent establishment with a prospect of pension, as recommended by the Conservator of Forests, Pegu Circle, Burma, will shortly be submitted to the Government of India.

10. Under the provisions of section 12 of the Andaman and Nicobar Islands Regulation, III of 1876, the Extra Assistant Conservator of Forests, Port Blair, was, with the sanction of the Governor-General in Council, appointed by the Chief Commissioner of the Andaman and Nicobar Islands to exercise the powers conferred on the Chief Commissioner by section 10 of that Regulation in regard to the issue of licenses to persons to fell any trees or take the produce of any trees within the limits of the Settlement of the South Andaman.

11. Mr. F. Trafford, Deputy Conservator of Forests, held charge of the Andaman Forest Division till the 17th October 1906, when he was relieved by Mr. B. B. Osmaston, Deputy Conservator of Forests, who returned to duty from combined leave. Both Messrs. Trafford and Osmaston have worked to my entire satisfaction, the latter especially I consider to be a very valuable officer. Messrs. Wrafter, Bonig and Brown, Extra Assistant Conservators, have worked to the complete satisfaction of the Deputy Conservator of Forests.

No. C. C.-99, dated Chatham, the 11th September 1907.

From—B. B. OSMASTON, Esq., F.C.H., Deputy Conservator of Forests, Andamans,

To—The Chief Commissioner and Superintendent, Port Blair.

SIR,—I have the honour to forward herewith the Annual Progress Report of Forest Administration in the Andamans for 1906-07.

G. I. C. P. O.—No. 1058-R. & A.—3-2-08—170—B. B. M.

PROGRESS REPORT
OF
FOREST ADMINISTRATION
IN THE
ANDAMANS
FOR
1906-07.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

I.—Alteration of areas.

1. There has been no alteration in the area of the reserved forests. Two hundred and ninety-nine acres of unclassed forest have been brought under cultivation during the year.

II.—Forest Settlements.

2. None undertaken or required.

III.—Demarcation.

3. No work was undertaken under this head, the boundaries being in good order.

IV.—Forest Surveys.

4. With the exception of minor surveys of plantations undertaken by the local forest staff no forest surveys were carried out.

The dangers in the neighbourhood of the islands in Ritchie's Archipelago were surveyed by the Marine Survey with a view to allowing the Forest Department steam timber boat *Rosamond* to approach these islands for the removal of padouk logs.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—Regulation of Management.

5. No working-plan exists for the Andaman forests with the exception of that for the North Andamans, which, however, has not yet come into force.

II.—Communications and Buildings.

(*a*) *Roads and bridges.*

6. *Wimberly Ganj Steam Tramway.*—This line has been extended during the year under report by 7,920 feet as far as the Kalatang Tea Garden, its total length being now 6 miles. It has been used throughout the year for the transport of logs from Shoal Bay Creek and of firewood from the Taungya area to the Kadakachang terminus for the Settlement timber and fuel supply. One thousand two hundred and eleven logs of miscellaneous timber, averaging about 1 ton each, and 1,534 cords of firewood were carried over the line. The locomotive can now make three trips a day, and can draw a load of 8 or 9 logs or 9 cords of firewood at each trip. The cost of extending the tramway amounted to Rs. 3,107 and that of maintaining and repairing the whole line, including cost of running the locomotives, was Rs. 5,300.

7. *Temporary tram lines.*—The following temporary tram lines were laid down during the year :—

Locality.	Length in feet.	Purpose for which constructed.	Remarks.
Kalatang	7,421	Fuel and timber.	
Goplakabang	12,724	Fuel.	In Taungya area.
Bindraban	7,160	Do.	In unclassed forest.
Namunaghar	7,245	Do.	
Rutland	5,208	Timber.	
Haddo	1,565	Do.	
Total ...	41,323	feet = $7\frac{5}{8}$ miles.	

The following lengths of temporary tramway were taken up, being no longer required :—

Locality.	Length in feet.	Purpose for which laid down.	Remarks.
Anikhet	2,850	Timber.	
Namunaghar	21,120	Fuel.	
Do.	2,480	Do.	Branch line.
Goplakabang	5,318	Do.	Do.
Bindraban	1,580	Do.	
Total ...	33,348	feet or $6\frac{1}{4}$ miles.	

At the close of the year there were 15 miles of temporary and 6 miles of permanent tramway in use. The cost incurred upon upkeep and extension of temporary lines amounted to Rs. 2,678 in the year.

(*b*) *Buildings.*

8. No new permanent buildings were undertaken during the year. Sixteen buildings of a temporary nature were erected as follows :—

3 Officers' rest-houses at Adajig, Lurujig and Rutland.

3 Foresters' quarters at Omita Kaicha, Adajig and Rutland.

3 Police quarters at the same three stations.

1 Ration godown at Rutland.

6 Convict barracks at Baratang Island and Rutland.

The above buildings are made of bamboos and thatched with cane leaves.

III.—Protection of Forests.

(*a*) *General protection.*

9. No cases were taken into Court in the year under report.

(*b*) *Protection from fire.*

10. No steps are necessary to guard against fires except at the annual burning of the taungya, when precautions have to be taken to prevent the fire spreading into the neighbouring plantations. This was done in a satisfactory manner and no fires resulted.

(c) Protection from cattle.

11. Cattle trespass within the reserves is practically unknown as there is ample grazing in the more open unclassed forests.

(d) Protection against injuries from natural causes.

12. The padouk weevil continues to devastate the young padouk plantations, especially in the wet months. There are however indications that as the saplings increase in height they are less liable to these attacks and it seems probable that as the plants pass into the young pole stage they will escape altogether. The life history of this beetle is not known. The mature insect attacks the leading shoot or shoots in a very tender state, ringing them completely and sucking the exuding juices. A number of new shoots result and the process is repeated, the ultimate result being a shrub resembling a plucked tea bush. In the cold weather months however the weevils are very scarce and most of the padouk plants manage to put out a good shoot before the advent of the rains when the insect again comes into prominence. No protective measures appear feasible.

IV.—Sylviculture.

(a) Natural reproduction.

13. Up to the present it has been the general opinion of all who have studied padouk in the Andamans that natural reproduction is practically non-existent, at any rate in the South Andamans. During the past cold weather the writer of this report discovered a large number of natural padouk seedlings scattered through the dense second growth forest which has resulted from fuel fellings which took place in the Namunaghar and Bindraban unclassed forests in 1905-06. These young plants were from 1 to 5 feet in height and apparently healthy, though completely covered in with the dense growth of inferior trees and shrubs which formed a canopy just above them. Steps were at once taken to free their heads, and in this way some thousands of promising natural seedlings extending over a good many acres of forest have received assistance. From the above it is evident that much may be done in the future to assist the natural reproduction of padouk in suitable localities.

(b) Artificial reproduction.

14. (1) *Mangrove sowings.*—An area of 32 acres of swamp in the Brigade Creek reserve near the Namunaghar quarry, which was felled over for fuel in 1901-02, was sown with mangrove seed 4′×4′. The young plants are doing well and there are very few failures. Vacancies aggregating 7 acres were filled up in old sowings in Brigade Creek, chiefly in those of 1904. The cost of the above operations was Rs. 206.

15. *Padouk plantations.*—An area of 225 acres of forest was cleared and burnt near Goplakabang. This was staked cut 6′×6′ (19 acres were staked 12′×3′ under the orders of the Conservator of Forests, Pegu Circle), and sown with padouk seed two at each stake.

The following cereals were also sown between the 6′×6′ lines at the suggestion of the Conservator :—

	Acres.
Local paddy	3
Burma hill paddy of two varieties, *viz.*, Toula	3½
Changnia	5½
Black sessamum	3
White sessamum	3½
Cotton	2¾

The above were all sown early in June and so far appear to be doing well with the exception of the local paddy and the cotton which are both failures. It is however too early at present to predict how these crops will react upon the padouk seedlings. The padouk seed was sown between the 24th April and the 11th May immediately after the burning of the jungle, which had been most successfully accomplished. Rain followed almost immediately

on the sowings and the results should have been exceptionally good. Unfortunately the reverse is the case. The seed turned out to be very inferior in quality and only about 5 per cent. has germinated. Usually padouk seed is available in large quantities every year, but in the present case it was very scarce and apparently what was available was of very inferior quality. Fortunately seed had been collected largely in excess of the requirements, and this having been sown in nursery beds has enabled 50 per cent. of the vacancies to be filled up in the plantation. The cost of the above plantation amounted to Rs. 2,781 or Rs. 12 per acre.

16. Weedings and cleanings in previous years' taungya plantations have been systematically carried out. In that of 1903 little more than creeper cutting was required. The cost of these operations, extending over 392 acres, amounted to Rs. 1,897.

(*c*) *Operations for the improvement of the growing stock.*

17. The only operation which falls under this heading is the cleanings around natural padouk seedlings and saplings described above in paragraph 13 under "Natural Reproduction."

(*d*) *Experiments.*

18. *Hevea braziliensis.*—Five thousand one hundred and fifty seeds of para rubber were collected from the local trees at Namunaghar in September and October and these were sown in an area of 12½ acres near Goplakabang, some in nurseries and some at stake. The germination was good, but the young plants suffered severely from the attacks of pigs and some small mammal, possibly a rat, so that at the end of the year there were only 407 survivors. In the para plantation of 1905 the young plants, which varied in height from 3 to 7 feet, were also very badly attacked by pig which uprooted and devoured the portion of the stem close to and below the surface of the ground. At first an application of coal-tar mixed with kerosine oil was tried, the mixture being smeared on the lower portion of the stem up to a height of about 6 inches. This proved useless as a deterrent to the pig and killed or nearly killed a number of the saplings, the application acting as a powerful cautery destroying the bark and bast down to the cambium. The jungle around the plants was then cut and piled up around each plant. This defeated the pigs and the damage ceased. In the meantime, however, over 1,000 young plants had been killed, leaving 2,994 survivors.

19. *Ficus elastica.*—A consignment of seed from Assam received in August was sown in nursery beds in accordance with the directions contained in the printed note by Mr. E. M. Coventry. The seed, however, did not germinate.

20. *Afzelia Palembanica.*—Three thousand seeds of this species, locally known as *Merbau*, were received in November 1906 from the Conservator of Forests, Federated Malay States, in exchange for padouk seed. The seed was sown in nursery beds in May and germination was prompt and very successful. The resulting seedlings were planted out in June 15′ apart in an area of 12 acres, which had been cleared by burning the previous year and which was covered with a young growth of a shrub (*trema sp.*) about 6 feet high. The seedlings when put out were from 1 to 2 feet in height.

21. *Swietenia mahogani.*—One pound of the seed of the above (about 1,100 seeds) was received in January 1907 from the Superintendent, Royal Botanic Gardens, Calcutta. This was sown in nursery beds in May and germination was successful. These seedlings were planted out in lines alternating with those of the *Merbau* described above.

V.—Exploitation.

(*a*) *System of Management.*

(i) Major Forest Produce.

22. The timber extracted includes (1) good coloured padouk (and to a small extent pyinma) for export and (2) off coloured padouk and miscellaneous timbers for Settlement use.

The padouk is extracted from the more distant camps, *viz.*, from Baratang and Rutland Islands situated at distances from Port Blair of about 40 and 20 miles, respectively.

In the case of Baratang Island, timber is removed *viâ* Port Anson and Middle Straits during the rough weather and from Lurujig, on the east coast, during the calm months, February to April inclusive.

The timber from Rutland is extracted on the west coast during the North-East monsoon and on the East Coast during the South-West monsoon, well protected anchorages for the steam timber boat being available there at these seasons.

Miscellaneous timber for local requirements is extracted from a camp (Chirya Tapu) situated on the South Andaman in Macpherson Straits. This is more or less sheltered all the year round, and is only 14 miles from Port Blair.

A certain amount of miscellaneous timber was also extracted from Jirkatang (in Shoal Bay) and from the taungya area near Goplakabang, the logs in both cases being carried by the steam tramway to Kadakachang and thence floated to Port Blair.

23. Up to the present year fuel from hard woods only has been accepted for local consumption. This year soft woods also were cut into firewood, two classes of fuel having been constituted. Second class fuel consisting of the soft woods and the smaller branches of hard-wooded species being classed as second class fuel and supplied to private consumers and for cooking convict's food, and large billets of the hard woods as first class fuel for steam engines, brick and lime burning. In this way a considerable economy in the area necessary for the supply of the fuel requirements of the Settlements will have been effected. Moreover a large quantity of fuel of both classes was extracted from the taungya area which in former years had been burnt *in situ*. This will materially reduce the cost of the taungya. In future it is believed that the taungya areas will yield the whole or nearly the whole of the annual requirement of the Settlement in firewood.

24. Fuel fellings took place at Bindraban and Namunaghar in addition to the taungya area, first class fuel being cut on the former and second class fuel on the latter. In the latter, the fellings passed over an area covered with a secondary growth of inferior species, where fuel fellings had taken place 10 years previously. In this coupe only such inferior growth was felled, all saplings and poles of timber-yielding species being carefully preserved as standards.

(ii) Minor forest produce.

25. Bamboos, cane and thatching leaves were cut and used locally for temporary buildings. Gurjan oil, also used locally for applying to shingle roofs, was tapped as usual in the dry weather. Mangrove bark, for tanning, was supplied to the Phœnix Bay Workshops.

(*b*) *Agency of Exploitation.*

(i) Departmental Agency.

26. Practically all forest operations in the Andamans are carried out by departmental agency. The small local free population, combined with the restrictions on behalf of convict discipline, make it necessary that this should be so.

Transport by land.

27. Logs extracted from the forests in the upper reaches of Shoal Bay Creek, as well as those resulting from the taungya fellings of the current year, were taken across by the Wimberley Ganj steam tramway, a distance of

some 5 miles to Kadakachang, where they were towed down Brigade Creek to Port Blair. The extraction of all padouk logs, as well as those of species which yield large timber, is carried out by elephants. Small logs or poles of such species as Gangow (*Mesua ferrea*) and Marble wood (*Diospyros Kurzii*) are dragged out by buffaloes where grazing for these animals is available.

28. One female elephant was purchased in Burma for Rs. 3,384 (total cost, including freight to Port Blair, was Rs. 4,972). A fine male elephant, Jumna Parshad, imported in 1905, died of colic in March. He was in excellent health up to the day of his death. The total number of elephants working at the close of the year was 43. The average number of days these elephants were at work during the year is shown as follows:—

	Days.
At work	260
Rest	74
Sick	31
TOTAL ...	365

Each elephant drags out on an average a log of 1¼ tons per diem. Adopting this figure we get as the total volume of timber extracted by elephants during the year—

Elephants.		Working days.		Tons.	
43	×	260	×	1¼	=13,975 tons.

This agrees very nearly with the actual total extracted, including timber lying in forest depôts at the close of the year.

The elephants kept good health on the whole, sickness being chiefly due to sores on the chest or withers produced by the dragging gear.

29. The average daily number of convicts employed on extraction of timber was 690 as compared with 700 in 1905-06.

TRANSPORT BY WATER.

30. Since the completion of the steam timber boat *Rosamond*, the rafting of timber by sea has been abandoned. The logs are now only rafted down the tidal creeks as far as the sea coast, where they are taken on board the *Rosamond*. In this way the danger of losing logs through the breaking up of a raft in a bad sea is avoided. The *Rosamond* has now been steadily at work for over a year and has proved herself an unqualified success. She can do more than was expected of her. A full cargo of logs amounts to about 120 tons and she can do two trips, and under pressure even three in a week. Her speed, about 5 knots, is not quite up to expectations, but on the other hand she is run with wood fuel, which, as coal was provided for, has resulted in a considerable saving on the original estimates.

31. Unfortunately the *Rosamond* was severely strained at her launching which has resulted in her leaking rather badly, especially in a sea way, and it has been found impossible to put this right in Port Blair. She will therefore have to be docked at Calcutta where she can be properly opened out and the defect technically known as "hogging" can be rectified.

32. At the same time it is proposed to make certain important alterations in her structure. An additional hold abaft the engines would enable her to carry 20 tons more aft, and consequently 20 tons more in the fore part of the ship. At present it is impossible to stow any logs in the after part of the ship and she cannot therefore take a full load or she becomes "down by

the head." When the above alterations have been carried out, she should carry 160 tons of timber, which will reduce the number of trips which it will be necessary for her to run, resulting in economy as well as allowing more time for cleaning and repairs to the ship and for rest to the crew.

33. The dry depôt on Chatham has now been completed and logs can be stacked in tiers 5′ deep where they will remain until required for conversion by the saw mill. The logs are first lifted and then conveyed into position along overhead gantrys by running pulleys attached to a wire rope, the motive power throughout being steam.

34. A dry depôt has also been instituted at Haddo. Here the logs are placed upon trucks immersed in the sea and are drawn up over rails by means of a capstan to a height of about 4 feet about high tide level. Thence they are removed by a tramline and spread out along the shore above the reach of the tide. These dry depôts should in future minimize the amount of damage to logs due to the marine borer.

Hand sawing operations.

35. About 20 pairs of ticket-of-leave convicts have been employed throughout the year sawing up hollow padouk trees in the forest and also broad gauge sleepers. The padouk slabs which were at first turned out were so badly cut that they had to be trued by passing them through the Chatham saw mills. The men are now however gaining experience and they turn out good and straight scantling, which has been shipped to America along with mill sawn timber without eliciting any complaints.

36. Two thousand broad gauge gurjan sleepers were also sawn and supplied at cost price to the Eastern Bengal State Railway at Calcutta. They were of two species, 1,000 of each kind, *viz.* (1) *Dipterocarpus turbinatus*—the large leafed gurjan—found chiefly near the sea shore ; (2) *Dipterocarpus alatus*—the small leafed gurjan—found mostly in land. The two kinds were deeply and clearly marked with two separate distinguishing marks so that the relative durability and suitability of the two species for sleepers should be ascertainable after a few years' trial.

37. The total value of disposals of timber during the year amounted to Rs. 5,33,621. The total value of minor produce removed departmentally and supplied almost entirely to the Settlement amounted to Rs. 32,356. Of this Rs. 26,033 was for fuel and Rs. 5,483 for gurjan oil, the balance of Rs. 840 being for mangrove bark, canes, etc.

(ii) Purchasers.

38. A certain quantity of gurjan timber is sawn up by the free residents and exported to Calcutta or Madras. The trees are purchased standing. Other species chiefly of inferior kinds such as Toungpeing (*Artocarpus chaplasha*) are used locally for house building. The value realized by sale of trees locally amounted to Rs. 3,042. Bamboos, canes and other minor produce were removed by purchasers to the value of Rs. 237.

(iii) Rights and Privileges.

39. None.

(iv) Free grants.

40. Free grants of poles of inferior species and minor produce were made to the free residents and to self-supporter convicts amounting to Rs. 12,926.

(c) Outturn and sources of Forest Produce.

41. The following table compares the outturn of the year according to the agency of exploitation and the kind of produce extracted with the figures of 1905-06 :—

		Timber.	Fuel.	Bamboos.	Minor Produce.
		C. Ft.	C. Ft.	No.	Rs.
Government	1906-07	654,055	682,280	17,200	5,985
	1905-06	606,198	605,450	10,000	7,084
Purchasers	1906-07	23,512	4,920	17,900	164
	1905-06	34,370	.....	20,400	191
Free grantees	1906-07	28,020	224,160	373,600	2,381
	1905-06	29,745	237,920	396,600	2,529
District officers	1906-07	77,881	24,745	346,228	1,319
	1905-06	147,664	27,615	364,905	464
TOTAL	1906-07	783,468	936,105	754,928	9,849
	1905-06	817,977	870,985	791,905	10,268

42. The increase in the amount of timber extracted by Government is due to the extra facilities of transport afforded by the *Rosamond*. The falling off in the amount of timber extracted by the Settlement is due to the large number of new barracks which were constructed in the previous year, leaving very little work of the kind for the current year.

43. *Export of timber.*—The following statement shows the species, number and volume of logs exported during the year under report compared with those exported during 1905-06 :—

	1906-07.				1905-06.			
	Logs.	Squares.	Scantlings.	Total.	Logs.	Squares.	Scantlings.	Total.
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Padouk	188,530	...	4,703	193,233	174,203	...	15,255	189,458
Koko	...	...	...	...	...	1,525	...	1,525
Pyinma	1,806	5,373	...	7,179	1,947	10,109	...	12,056
Chuglam, black	99	...	...	99	125	548	...	673
Chuglam, white	236	...	...	236	346	...	...	346
Toungpeing	95	...	...	95	123	...	95	218
Didu	597	...	...	597	2,158	...	2,904	5,062
Gurjan	20	...	...	20	...	...	280	280
Mohwa	76	...	...	76	...	...	...	...
Lalchini	100	...	...	100	...	...	...	...
TOTAL	191,559	5,373	4,703	201,635	178,902	12,182	18,534	209,618

The above statement shows a slight increase in the export of padouk, and a falling off in other species. This latter is due to the fact that the Chatham saw mills have not been able to cut up much timber for export.

44. The following shows the outturn of timber supplied to the saw mill in the log with the corresponding outturn received from the saw mill compared with the results of working in 1905-06:—

Year.	Timber sent to saw mill.		Timber received from saw mill.	Percentage of waste.
	No. of Logs.	Volume.		
		C. ft.	C. ft.	
1906-07	6,586	315,332	152,444	52
1905-06	6,322	294,063	127,626	58

This shows an increase of nearly 20 per cent. in the outturn of the mills as compared with that of the previous year. The percentage of waste has also been substantially reduced, which is satisfactory.

45. The timber from the Chatham saw mills was disposed of as follows:—

To whom supplied.	Padouk.	Other.	Total.
	Tons.	Tons.	Tons.
Settlement	607	1,099	1,706
Messrs. Gillanders, Arbuthnot & Co., Calcutta . .	62	11	73
Local public	76	48	124
Used departmentally	83	221	304
Written off	...	16	16
Free grant	...	1	1
Reconverted into small sizes	12	...	12
TOTAL . .	840	1,396	2,236
Total for 1905-06 . .	1,348	1,194	2,542

The sales of timber converted in the mills are seen to be less than those in 1905-06 and this in spite of the increased outturn. This is explained by the fact that about 1,140 tons of planks and scantlings have been sawn up to supply local requirements and are being kept in stock to season.

46. The number of trees felled and the volume of timber extracted compares with the figures of last year as follows:—

Year.	Number of trees felled.			Value of timber extracted.
	Padouk.	Other.	Total.	
				C. ft. Tons.
1906-07	4,309	3,327	7,636	654,055=13,081
1905-06	3,809	2,280	6,089	606,198=12,124
DIFFERENCE . .	+ 500	+ 1,047	+ 1,547	+ 47,857 + 957

The above figures show a decided increase in the amount of timber extracted during the year under report, both as regards padouk and other species.

47. *Removal of produce by purchasers.*—The following statement compares the quantities and values of the produce removed during the year under report as compared with 1905-06 :—

		Year 1906-07.		Year 1905-06.	
		Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.
Timber	Tons.	469	3,042	684	3,249
Fuel	C. ft.	4,920	10	...	...
Bamboos	No.	17,900	22	20,400	26
Canes	No.	9,150	6	9,600	6
Canes with roots	No.	...	...	...	...
Thatching leaves	Bdls.	3,339	209	2,947	185
Total value		...	3,289	...	3,466

The differences are not very large and call for no comment.

48. *Fuel.*—The quantities of fuel extracted departmentally during the year was 8,528 cords which realized Rs. 31,018 against 7,568 cords, value Rs. 30,272, in 1905-06.

49. *Minor produce.*—The quantity of gurjan oil collected was 10,992 gallons, value Rs. 5,496, as against 13,161 gallons, value Rs. 6,581, in 1905-06. The falling-off was due to scarcity of labour. Eight hundred and twenty-seven maunds of mangrove bark were supplied for local requirements, value Rs. 465, as against 1,190 maunds supplied, value Rs. 483, in 1905-06.

50. The total expenditure under Management of State Forests was Rs. 2,75,028.

CHAPTER III.

Financial Results.

51. The Revenue and Expenditure of the year under report compares with the figures of the year 1905-06 and the average of the last five years as follows : —

Year.	Revenue.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
1906-07	6,09,393	2,75,028	3,34,365
1905-06	5,86,295	3,49,756	2,36,539
Average of last 5 years	4,51,020	2,95,175	1,55,844

The surplus, which is nearly a lakh more than that of the previous year, is the largest on record. The increase in revenue is due to more padouk having been extracted. The decrease in expenditure is owing to the steam timber boat *Rosamond* having been completed and paid for in the previous year.

52. The following statement compares the expenditure for 1906-07 with that of 1905-06, giving also the percentages of the total expenditure :—

	1906-07.		1905-06.	
	Amount.	Percentage of total expenditure.	Amount.	Percentage of total expenditure.
	Rs.		Rs.	
Exploitation	1,74,310	64	1,62,015	47
Purchase and upkeep of live-stock, tools, etc.	43,998	17	1,21,086	35
Roads, tramways and buildings . .	11,177	4	2,809	1
Organization and improvement . .	6,487	2	20,857	6
Establishment	35,156	13	35,339	11

The increased expenditure under exploitation is explained by the larger volume of timber extracted. The much reduced expenditure under the next heading is due to the purchase of a single new elephant against 7 in 1905-06, and also the part cost of construction of the *Rosamond* charged in that year. The increased expenditure under roads and buildings is due almost entirely to stores purchased for the construction of a head-quarters bungalow for the Extra-Assistant Conservator of Forests. The decrease in expenditure under organization, etc., is due to the fact that the greater portion of the charges incurred in connection with the North Andaman exploration were debited in 1905-06. The percentage of expenditure to revenue is 45 as against 59 last year, and that of surplus to gross receipts is 55 as against 40 in 1905-06.

53. Form No. 65 shows that the stock of timber, both converted and in the log, was greater at the end of the year under report by about 1,630 tons. The stock of converted timber now amounts to over 1,100 tons. A large stock is kept so as to allow of the supply of seasoned timber to the Settlement.

CHAPTER IV.

ADMINISTRATION.

54. Mr. T. A. Hauxwell, Conservator of Forests, Pegu Circle, inspected the Division between the 30th April and 11th May. His report was submitted to the Chief Commissioner of the Andamans and Nicobars.

Mr. F. Trafford, Deputy Conservator of Forests, held charge of the Division from the commencement of the year till the 17th October and Mr. B. B. Osmaston, Deputy Conservator of Forests, from that date till the end of the year.

Mr. G. T. Wrafter, Extra-Assistant Conservator of Forests, was attached to the Division throughout the year. His work has been characterized throughout by energy and thoroughness.

Mr. M. C. C. Bonig, Extra-Assistant Conservator of Forests, was attached to the Division from the commencement of the year until the 2nd May 1907, when he proceeded on leave to Europe. He has been of great service in connection with the successful working of the steam timber boat *Rosamond*, the construction of dry depôts and the starting of hand sawing operations.

Mr. A. R. Brown, Extra-Assistant Conservator of Forests, has been attached to the Division since the 3rd May 1907. He has quickly got in touch with the work and displays considerable tact in dealing with the convicts.

The Executive staff, and specially Forest Rangers Hussain Ali and Mohan Lal and Deputy Ranger Kishen Das, have given every satisfaction.

The Clerical staff have also done good work, Babus Khuda Baksh, Subhan Ali and Durga Singh being particularly deserving of commendation.

CHAPTER V.

General.

55. No new buffaloes were purchased during the year and there were no casualties. As however there was not sufficient work for so many animals, the weaker were weeded out and sold by auction. Seventeen were disposed of in this way, leaving 15 good strong animals which suffice for present requirements.

56. The steam launch *Eileen* was at work for 258 days. She is well suited to the work required of her, *viz.*, towing lighters, timber boats and small rafts of timber in the harbour.

57. The oil motor boat *May* worked well as the Divisional Officer's inspection cutter.

B. B. OSMASTON,
Deputy Conservator of Forests,
In charge Andamans Division.

PORT BLAIR;
The 11th September 1907.

Annual Form No. 51—[*Prescribed*].

Area of Reserved Forests, Protected Forests and Unclassed State Forest and Waste lands for the forest year 1906-07.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1906. Acres.	Area on 1st July 1906. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 30th June 1907. Acres.	Area on 30th June 1907. Equivalent in square miles.	No. and date of Notification of addition or transfer, etc.	Remarks.
			Reserved Forests.								
Andamans.	...	Andamans.	1. Navy Bay Padouk Plantation Reserve.	10	0·04	...	...	10	0·04	...	These forests have been simply declared "Reserved Forests" in the local Official Gazette in accordance with the policy enunciated by the Inspector-General of Forests in his suggestions of 1891.
			2. Navy Bay Teak Plantation Reserve.	16				16			
			3. Ali Musjid Reserve . .	14,916	23	...	...	14,916	23	...	
			4. Mount Harriet Reserve.	28,800	45	...	...	28,800	45	...	
			5. Brigade Creek Reserve.	2,344	3·66	...	...	2,344	3·66	...	
			6. Dhani Khari Reserve .	8,045	12·57	...	...	8,045	12·57	...	The Indian Forest Act is not in force in the Andamans.
			7. Hope Town Reserve .	415	0·65	...	...	415	0·65	...	
			8. Shoal Bay Reserve . .	9,728	15·20	...	...	9,728	15·20	...	
			9. Portmeadows Reserve .	12,160	19·00	...	...	12,160	19·00	...	
			10. Middle Strait Reserve .	23,411	36·58	...	...	23,411	36·58	...	
				99,845	156·00	...	...	99,845	156·00	...	
			Protected Forests. *Nil.*								
			Unclassed State Forests and Waste Lands.								
				1,148,540	1,795	...	299*	1,148,241	1,794	...	*These areas were cleared for cultivation by the Settlement.
			Total . .	...	...	...	...	...	1,950	...	

Form No. 52.

Statement showing the progress made in, and the expenditure incurred on, Forest Settlements during 1906-07.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year. Sq. Ms.	Areas finally settled during the year. Number and date of Government order according final sanction to the Settlement.	Name of Forest settled.	Area, in square miles.	Expenditure incurred during the year on areas finally settled. In Forest accounts.	Expenditure incurred during the year on areas finally settled. In other accounts.	Entire cost per square mile of area finally settled during the year.	Areas undergoing settlement. At commencement of the year. Name of tract.	Area, in square miles.	Taken in hand during the year. Name of tract.	Area, in square miles.	Expenditure incurred during the year on areas undergoing Settlement. In Forest accounts.	In other accounts.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						Rs.	Rs.	Rs.					Rs.		
Andamans.	Andamans	156	...	...	...	...	...	...	...	...	...	...	...	...	...

Form No. 53.

Record of Demarcation and Maintenance of Boundaries, 1906-07.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries not demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans ...	...	...	42	42	29	116	187	...	7	

N. B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub divisions, such as blocks, compartments, coupes.

Form

Statement of Forest areas surveyed and under

Division.	Areas surveyed and under															
	Special surveys—Maps on 4" scale or over, by Survey of India Department or Forest Survey Branch.								*Ordinary, included in District Surveys.*							
	WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.			WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.		
	With details of growing stock.		Without details of growing stock.		Total cost.	Previous.	Of the year.	Total cost.	With details of growing stock.		Without details of growing stock.		Total cost.	Previous.	Of the year.	Total cost.
	Previous.	Of the year.	Previous.	Of the year.					Previous.	Of the year.	Previous.	Of the year.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Ms.	Rs.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.
Andamans ...	...	...	166	...	...	...	...	...	248	...	1,950	...	...	...	...	...

Form

Progress made in Work

Division.	Areas for which Working-Plans have been completed.		Areas for which Working-Plans are being compiled.	
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.
1	2	3	4	5
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.
Andamans	317	...	...	...

No. 54.

Survey during the year 1906-07.

Survey during the year.								Areas remaining to be taken under Survey.	Total Forest area at end of the year, as per Form No. 51.	COST.			Remarks.
Chain and compass or other surveys by local officers.													
WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.								
4-INCH OR OVER.		UNDER 4-INCH.		Total cost.	Previous.	Of the year.	Total cost.			Previous.	Of the year.	Entire cost of all Surveys to end of the year.	
Previous.	Of the year.	Previous.	Of the year.										
18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Rs.	Rs.	
...	...	...	...	...	...	...	...	...	1,950	(a)	...	...	(a) Not accurately known. The cost of the Andamans Survey is not known.

No. 55.

ing-Plans, 1906-07.

Areas for which Working-Plans have still to be taken in hand.	Total Forest area, as in Form No. 51.	Entire cost, per square mile, of Working-Plans completed.	Remarks.
6	7	8	9
Sq. Ms.	Sq. Ms.	Rs.	
1,633	1,950	64	Reserved Forests ... ... 156 square miles. Unclassed State Forests ... 1,794 „ The area for which a Working-Plan has been compiled (the North Andaman) forms part of the Unclassed State Forests.

Form

Communications and

Division.	NEW WORK UNDERTAKEN DURING THE YEAR.					
	BUILDINGS.		ROADS AND PATHS.			Total expenditure on new work.
	Description of Building.	Expenditure incurred.	Road or path and object of the same.	Length of Road or Path.	Expenditure incurred.	
1	2	3	4	5	6	7
		Rs.		Miles.	Rs.	Rs.
Andamans ...	Constructing three rest-houses.	31	Construction of steam tramway, Wimberley Gunj.	1·5	3,107	...
	Stores purchased for construction of the Extra Assistant Conservator's head-quarters bungalow.	3,017				
	Constructing three subordinates' quarters.	47				
	Constructing three police guard houses.	71				
	Constructing truck shed	62				
	Constructing tool godown	13				
	Constructing temporary convict barracks.	2,361				
	Total ...	5,602	Total ...	...	3,107	8,709

No. 56.

Buildings, 1906-07.

REPAIRS EXECUTED DURING THE YEAR.						
BUILDINGS.		ROADS AND PATHS.			Total expenditure on repairs.	REMARKS.
Nature of Repairs.	Expenditure incurred.	Nature of Repairs.	Length repaired.	Expenditure incurred.		
8	9	10	11	12	13	14
			Miles.	Rs.	Rs.	
Repairs to subordinates' quarters.	42	Repairs to steam tram road.	4·5	*5,300	...	* Rs. 3,805 charged to I. A. *a*.
Repairs to temporary convicts' barracks.	931					
Total ...	973	Total	...	5,300	6,273	

Form No. 59.

Area closed and open to Grazing during 1906-07.

Division.	AREA IN SQUARE MILES.						Remarks.
	Closed to all animals.		Closed to browsers (camels, goats or sheep).		Open to all animals.	Total area.	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.		
1	2	3	4	5	6	7	8
			Reserved Forests.				
			... ...		0·04	1·56	
Andamans	155·66	.....	*Protected Forests.*				
			Nil.				
			Unclassed State Forests.				
			... ...		1·794	1·794	

Form No. 61.

Artificial reproduction.

Division.	Kind of plantation.	Area in acres. On 1st July 1906.	Added during the year.	Excluded during the year.	Area on 30th June 1907.	Expenditure during the year. Creation.	Upkeep.	Total expenditure from commencement. Creation.	Upkeep.	Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13
						Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
					Regular plantations.							
	Teak (Navy Bay)	10	...	...	10	...	...	Not known		...	...	Old plantation.
	Mahogany (Namunaghar)	1	...	...	1	...	...	Ditto		...	...	
	Padouk (Goplakabang), 1883	4	...	...	4	...	23	Ditto		...	...	
	„ („) 1884	5	...	...	5	...	...	Ditto		...	...	
	„ („) 1885	16	...	...	16	...	20	Ditto		...	...	
	„ („) 1886	20	...	...	20	...	...	Ditto		...	...	
	Mangrove (Brigade Creek)	344	32	...	376	128	78	Ditto		...	...	
	„ (Dhani Khari)	226	...	...	226	...	...	Ditto		...	...	
	Para rubber (Namunaghar)	1	...	...	1	...	...	18	70	...	...	
	„ (Goplakabang)	30	...	4	26	...	597	181	778	...	...	
	Afzelia and Mahogani (Goplakabang).	...	12	...	12	79	...	79	...	...	...	
	Total	657	44	4	697	207	718	278	848	...	...	
					Taungy plantations.							
	Padouk	392	225	...	617	2,781	1,897	8,417	5,485	...	...	
	Total	392	225	...	617	2,781	1,897	8,417	5,485	...	...	
					Cultural operations.							
					Nil.							
	Total	...	...	...	...	...	...	...	...	...	...	

NOTE.—Upkeep includes cleanings, weedings, thinnings, filling up blanks, etc. Cultural operations are defined in the memorandum, appended to Circular No. 19-F, dated the 5th August 1904

Form

Outturn (in cubic feet, solid) of Timber and Fuel during the

Division.	Timber in the rough; Logs.					Timber in the rough; Poles.					Sawn or square timber.				
	Government.	Purchasers.	Free Grantees.	District officers.	Total.	Government.	Purchasers.	Free Grantees.	District officers.	Total.	Government.	Purchasers.	Free Grantees.	District officers.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
I.—Reserved Forests.															
Andamans	1,33,777	...	...	...	1,33,777	855	50	†9,340	34,753	44,998	3,217	*1,924	...	...	5,141
Total .	1,33,777	...	...	...	1,33,777	855	50	9,340	34,753	44,998	3,217	1,924	...	...	5,141
II.—Protected Forests.															
Nil.															
Total .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
III.—Unclassed Forests.															
	4,98,519	...	...	...	4,98,519	5,800	...	†18,680	43,128	67,608	§11,887	*21,538	...	...	33,425
Total .	4,98,519	...	...	...	4,98,519	5,800	...	18,680	43,128	67,608	11,887	21,538	...	...	33,425
Grand Total.	6,32,296	...	...	...	6,32,296	6,655	50	28,020	77,881	1,12,606	15,104	23,462	...	...	38,566

Charcoal should be shown by its equivalent in fuel, the quantity of wood consumed in producing it being
In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals*

No. 62. *(Articles 269, 271 and 272.)*

year 1906-07 and Agency of Exploitation.

Miscellaneous.					Fuel.					Total Outturn.	Remarks.
Government.	Purchasers.	Free Grantees.	District officers.	Total.	Government.	Purchasers.	Free Grantees.	District officers.	Total.		
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
...	...	...	...	...	4,02,600	3,960	44,832‡	24,745	4,76,137	6,60,053	* Actual.
...	...	...	...	...	4,02,600	3,960	44,832	24,745	4,76,137	6,60,053	†An estimate based on numbers of free grantees' huts, 10 bullies = 5 cubic feet and two posts = 10 cubic feet are allowed for each house.
											‡There are 1,868 householders and quantity of fuel removed per house is estimated at 1½ cords per annum, one cord = 80 cubic feet solid.
...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	2,79,680	960	1,79,328‡	...	4,59,968	10,59,520	§ Logs squared with axe.
...	...	...	...	...	2,79,680	960	1,79,328	...	4,59,968	10,59,520	
...	...	...	...	...	6,82,280	4,920	2,24,160	24,745	9,36,105	17,19,573	

entered in cubic feet solid.

and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 63—[*Prescribed.*]

Outturn of Minor Forest Produce during the year 1906-07.

Description of Produce.	Produce Removed or Utilized: By Government Agency.		By Purchasers.		By Free Grants.		By District Officers.		Total.		Remarks.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12
		Rs.		Rs.		Rs.		Rs.		Rs.	
I.—Reserved Forests.											
Bamboos . . No.	900	1	5,966	7	124,535	156	77,673	97	209,072	261	The entries in columns Nos. 6 and 7 are *estimates* based upon the following data:—1,868 self-supporters' and free residents' houses, each of which is allowed—200 bamboos, 40 canes, 20 bundles thatching leaves. } Annually. All the other figures are actuals.
Canes . . „	3,210	2	3,150	2	24,907	15	3,284	2	34,551	21	
Thatching leaves . Bdls.	123	8	953	60	12,453	778	1,378	86	14,907	932	
Total . .	...	11	...	69	...	949	...	185	...	1,214	
II.—Protected Forests. *Nil.*											
III.—Unclassed State Forests.											
Bamboos . . No.	16,300	20	11,934	15	249,067	311	2,68,555	336	545,856	682	
Canes . . „	5,802	3	6,000	4	49,813	31	1,875,140	1,172	1,936,755	1,210	
Thatching leaves . Bdls.	181	11	2,386	149	24,907	1,557	953	59	28,427	1,776	
Gurjan oil . . lbs.	87,933	5,496	...	...	...	...	...	...	87,933	5,496	
Bark . . „	66,170	465	...	...	...	...	...	...	66,170	465	
Total . .	...	5,995	...	168		1,899	...	1,567	...	9,629	
Grand Total .	...	6,006	...	237	...	2,848	...	1,752	...	10,843	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 64.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally, or otherwise disposed of, during the year 1906-07.

Name of Division.	Balance at commencement of the year in forests and sale depots.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year.
1	2	3	4	5	6
	Padouk.				
	1,21,267	4,59,212	5,80,479	3,92,516	1,87,963
	Koko.				
	4,978	16,950	21,928	17,442	4,486
	Chuglam black.				
	671	18,341	19,012	14,295	4,717
	Pyinma.				
	14,038	45,777	59,815	52,127	7,688
	Marblewood.				
Andamans	821	918	1,739	1,738	1
	Satinwood.				
	186	4	190	178	12
	Other timbers.				
	34,999	2,45,184	2,80,183	2,26,604	53,579
	Firewood.				
	36,880	6,82,280	7,19,160	6,49,160	70,000
Total ...	2,13,840	14,68,666	16,82,506	13,54,060	3,28,446

Annual Form No. 65—[*Prescribed*].

Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1906-07.

Description of Timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in Value.		Remarks.
	No.	C. ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
			Rs.			Rs.	Rs.	Rs.	Rs.
Logs ...	4,568	1,57,487	1,69,860	4,182	2,01,173	1,81,902	12,042	...	For ... 54,191
Planks ...	...	19,473	19,827	...	57,273	60,992	41,165	...	Against ...
Firewood ...	...	36,880	1,844	...	70,000	2,828	984	...	For ... 54,191
Total ...	4,568	2,13,840	1,91,531	4,182	3,28,446	2,45,722	54,191	...	

Annual Form No. 66—[*Prescribed*].

Abstract showing the Value of Live and Dead Stock for the year 1906-07.

Description of Live and Dead Stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in Value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
		Rs.		Rs.	Rs.	Rs.	
Elephants ...	48	1,04,000	45	85,000	...	19,000	One elephant "Malatoo" belonging to the Settlement but used by Forest Department, not included in the list. One elephant was purchased during the year. Two elephants died during the year. Two elephants let go as being past work.
Buffaloes ...	32	1,200	15	900	...	300	17 buffaloes sold in auction.
Boats, timber towing	22	12,100	23	12,700	600	...	One boat constructed.
Lighters ...	2	2,300	2	2,100	...	200	
Carts, small ...	2	30	6	200	170	...	Four carts constructed.
Crane ...	1	260	1	200	...	60	
Portable tramway ...	25¾ miles, 1 locomotive, 98 trucks, 5 trollies.	1,37,000	25¾ miles, 1 locomotive, 98 trucks, 5 trollies.	1,25,000	...	12,000	
Office furniture ...	...	360	...	470	110	...	
Miscellaneous stores, axes, dahs, winches, etc.	...	20,000	...	21,300	1,300	...	
Dingy	2	120	1	70	...	50	One sunk.
Foresters' boat ...	1	130	1	110	...	20	
Steam timber boat *Rosamond.*	1	1,23,000	1	1,11,000	...	12,000	
Steam launch *Eileen*	1	14,000	1	13,300	...	700	
Jolly boats ...	2	400	3	600	200	...	
Buildings ...	...	5,000	...	6,200	1,200	...	
Butting saw engine and steam winch.	...	3,000	...	2,850	...	150	Rs. For ... 3,580 Against ... 44,480
TOTAL ...	...	4,22,900	...	3,82,000	3,580	44,480	Against ... 40,900

Form No. 67—[*Prescribed*].

Summary of Revenue of the Andamans Division during 1906-07.

REVENUE.

	Rs.	As.	P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
(*a*) Timber	5,70,105	0	0
(*b*) Firewood and charcoal	27,772	0	0
(*c*) Bamboos	2	0	0
(*d*) Sandal-wood	.....		
(*e*) Grass and other minor produce	6,011	0	0
TOTAL I	6,03,890	0	0
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—			
(*a*) Timber	3,042	0	0
(*b*) Firewood and charcoal	10	0	0
(*c*) Bamboos	22	0	0
(*d*) Grazing and fodder grass	.....		
(*e*) Other minor produce	215	0	0
(*f*) Forest stamps	.....		
(*g*) Other items	.....		
(*h*) Commutation fees	.....		
TOTAL II	3,289	0	0
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE	.....		
TOTAL III	.....		
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—			
(*a*) Duty on foreign timber and other forest produce	.....		
(*b*) Revenue from shared and private forests	.....		
TOTAL IV	.....		
V.—MISCELLANEOUS—			
(*a*) Fines and forfeitures	15	0	0
(*b*) Refunds	512	0	0
(*c*) Other sources	1,687	0	0
TOTAL V	2,214	0	0
GRAND TOTAL REVENUE	6,09,393	0	0

Form No. 67—[*Prescribed*].

Summary of Expenditure of the Andamans Division during 1906-07.

EXPENDITURE.

A.—CONSERVANCY AND WORKS.

	Rs.	As.	P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—			
(*a*) Timber	1,58,501	0	0
(*b*) Firewood and charcoal	12,260	0	0
(*c*) Bamboos	.....		
(*d*) Sandal-wood	.....		
(*e*) Grass and other minor produce	3,549	0	0
TOTAL A. I	1,74,310	0	0

EXPENDITURE—*contd.*

A.—CONSERVANCY AND WORKS—*contd.*

	Rs.	As.	P.
II.—Timber and other produce removed from the Forests by consumers or purchasers	.....		
Total A. II	.....		
III.—Drift and waif wood and confiscated Forest Produce .	.....		
Total A. III	.....		
IV.—Revenue from Forests not managed by Government—			
(*a*) Duty on foreign timber and other forest produce . . .	.....		
(*b*) Revenue from shared and private forests	.....		
Total A. IV	.....		
V.—Rent of leased Forests and payments to Shareholders in Forests managed by Government	.....		
Total A. V	.....		
VI.—Live Stock, Stores, Tools and Plant—			
(*a*) Purchase of cattle	3,384	0	0
(*b*) Feed and keep of cattle	33,964	0	0
(*c*) Purchase of stores, tools and plant	6,650	0	0
Total A. VI	43,998	0	0
VII.—Communications and Buildings—			
(*a*) Roads and bridges	4,602	0	0
(*b*) Buildings	6,575	0	0
(*c*) Other works	.....		
Total A. VII	11,177	0	0
VIII.—Organization, improvement and extension of Forests—			
(*a*) Demarcation	7	0	0
(*b*) Cost of Settlements ; compensation for land and rights .	.....		
(*c*) Surveys	106	0	0
(*d*) Working-plans	771	0	0
(*e*) Sowing and planting	5,603	0	0
(*f*) Protection from fire	.....		
(*g*) Other works	.....		
Total A. VIII	6,487	0	0
IX.—Miscellaneous—			
(*a*) Law charges	.....		
(*b*) Other charges	3,900	0	0
Total A. IX	3,900	0	0
Total A.—Conservancy and Works	2,39,872	0	0

EXPENDITURE—*concld.*

	Rs.	As.	P.
Brought forward, Total A.—Conservancy and Works	2,39,872	0	0
B.—ESTABLISHMENTS.			
I.—SALARIES—			
(*a*) Conservators	.....		
(*b*) Superior officers	19,875	0	0
(*c*) Subordinate forest and depôt establishments	4,173	0	0
(*d*) Office establishments	3,220	0	0
(*e*) Deputation and special allowances	3,114	0	0
(*f*) Exchange compensation allowance	483	0	0
TOTAL B. I	30,865	0	0
II.—TRAVELLING ALLOWANCES—			
(*a*) Conservators	.....		
(*b*) Superior officers	2,878	0	0
(*c*) Subordinate forest and depot establishments	759	0	0
(*d*) Office establishments	22	0	0
TOTAL B. II	3,659	0	0
III.—CONTINGENCIES—			
(*a*) Stationery	43	0	0
(*b*) Carriage of tents and records	2	0	0
(*c*) Rents, rates and taxes	.....		
(*d*) Pay of police guards	.....		
(*e*) Official postage	70	0	0
(*f*) Sundries	517	0	0
TOTAL B. III	632	0	0
TOTAL B.—ESTABLISHMENTS	35,156	0	0
GRAND TOTAL OF ALL EXPENDITURE	2,75,028	0	0
SURPLUS	3,24,365	0	0

Annual Form No. 68—[*Prescribed*].

Account Current for the Forest year 1906-07.

RECEIPTS.	Rs. As. P.	Rs. As. P.	PAYMENTS.	Rs. As. P.	Rs. As. P.
Cash balance	.....	6 14 1	I.—Refunds and Drawbacks ...	.....	10,293 3 6
			Expenditure during the year ...	.....	2,75,028 2 11
VIII.—Assessed Taxes—			Forest Deposits	.....	.....
Income-tax—Deductions from salaries.	.....	542 15 11	Forest Advances	.....	2,349 9 10
Revenue during the year ...	.....	6,09,393 4 10	Suspense Account	.....	15 14 0
Forest deposits	.....	.....			
Forest advances	.....	2,199 9 10			
Suspense account	.....	5 0 0	Savings Bank Deposits—		
			Bank Account—		
Service Funds—			Forest Officers' Provident Fund ...	.....	.....
Uncovenanted Service Family Pension Fund, Bengal.	.....	.....	Cash Remittances—Local—Forest Remittances.		
			Remittances to Treasuries ...	4,31,904 14 4	.....
Savings Bank Deposits—			Unpaid cheques written back ...	0 0 10	.....
Bank Account—			Inter-divisional Transfers ...	.....	4,31,904 15 2
Forest Officers' Provident Fund	2,007 0 0	.....			
Special Account—			Account Current with Foreign States—		
General Family Pension Fund	420 0 0	2,427 0 0	Berar Suspense Account ...	.....	.....
Cash Remittances—Local—Forest Remittances—			His Majesty's Colonial Government, Ceylon.	.....	.....
Forest cheques drawn ...	1,41,555 7 7	.....			
Revenue Remittances written back.	6 10 9	...	Exchange Account with other Governments—		
Inter-divisional Transfers ...	.....	1,41,562 2 4	Account between India and—		
Account Current with Foreign States—			—Forest Remittances from—to—.	.....	.....
Berar Suspense Account ...	.....	.....	—Items adjustable by— ...	.....	.....
His Majesty's Colonial Government, Ceylon.	.....	.....	Account between India and Burma—		
Exchange Account with other Governments—			III. Items adjustable by India	491 2 9	.....
Account between India and—			IV. Items adjustable by Burma.	297 13 4	.....
—Forest Remittances to—from—.	.....	.....	Account between India and Eastern Bengal—		
—Items adjustable by— ...	.....	.....	—Forest Remittances from—to—.	.....	.....
Account between—and—			IV. Items adjustable by Eastern Bengal and Assam	57 0 0	.....
—Forest Remittances to—from—.	.....	.....	Account between—and—		
III. Items adjustable by India	265 0 0	.....	—Forest Remittances from—to—.	.....	.....
IV. Ditto ditto Burma	15 14 0	.....	Account between India and Bengal—		
Account between—and—			IV. Items adjustable by Bengal	89 8 0	.....
III. Items adjustable by India	1,415 9 8	.....	Account between—and—		
IV. Ditto ditto Bengal	57 0 0	.....	—Forest Remittances from—to—.	.....	.....
Account between—and—			Account between—and—		
—Forest Remittances to—from—.	.....	.....	—Forest Remittances from—to—.	.....	.....
Account between—and—			Account between—and—		
Forest Remittances to—from—.	.....	.....	—Forest Remittances from—to—	.....	.....
Account between—and—			—Items adjustable by— ...	.....	.....
—Forest Remittances to—from—.	.....	.....	Account between—and—		
Account between—and—			—Forest Remittances from—to—.	.....	.....
III. Items adjustable by India	196 14 10	.....	IV. Items adjustable by Bombay	.....	935 8
IV. Ditto ditto ...	.....	.....			
Account between—and—			Inter-Departmental Transfers—		
—Forest Remittances to—from—.	.....	.....	P. W. Department, Ordinary Branches	30,502 14 10	.....
—Items adjustable by— ...	.....	1,950 6 6	„ „ Railway Branch	.....	.....
Inter-Departmental Transfers—			Military Department, Bengal Command.	.....	.....
P. W. Department, Ordinary Branches.	43,850 7 10	.....	Military Department, Punjab Command.	.....	.....
P. W. Department, Railway Branch.	.....	.....	Military Department, Madras Command.	.....	.....
Military Department, Eastern Command.	369 8 3	.....	Military Department, Bombay Command.	.....	.....
Military Department, Burma Command.	4 2 0	.....	Telegraph Department... ...	.....	.....
Military Department, Madras Command.	.....	.....	Post Office Department ...	.....	.....
Military Department, Bombay Command.	.....	.....	Marine Department	1,928 10 10	.....
Telegraph Department ...	3 14 9	.....	Civil Departments	1,62,427 8 4	1,94,859 2 0
Post Office Department ...	184 14 8	.....			
Marine Department ...	9,218 4 6	.....			
Civil Departments	1,03,817 7 5	1,57,448 11 5	Cash Balance	.....	149 9 5
GRAND TOTAL ...	.....	9,15,536 0 11	GRAND TOTAL ...	.....	9,15,536 0 11

Form No. 69—[*Prescribed*].

Revenue received and Outstandings on account of Revenue during 1906-07.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the Department at end of year.	Remarks.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
Andamans	Timber, Firewood and Gurjan oil, etc.	56,816 14 7	5,65,977 1 11	6,22,794 0 6	6,04,535 8 7*	18,258 7 11	*Rs. 645-10-7 written off on account of bills cancelled.
	Other Revenue	.....	5,503 6 10	5,503 6 10	5,503 6 10	.....	
	Total	56,816 14 7	5,71,480 8 9	6,28,297 7 4	6,10,038 15 5	18,258 7 11	

Form No. 70.

Outstandings and Liabilities on account of Contractors and Disbursers for 1906-07.

Division.	Department Debtor.			Department Creditor.			Balance Due.	
	Opening balance.	Recoveries in cash and value of supplies and work done during the year.	Total.	Opening balance.	Payments made during year.	Total.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	Rs. As. P.	Rs. As. P.	Rs As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Andamans	...	2,199 9 10	2,199 9 10	.....	2,349 9 10	2,349 9 10	150 0 0	.....
Total	...	2,199 9 10	2,199 9 10	.....	2,349 9 10	2,349 9 10	150 0 0	.....

Form No. 71—[*Prescribed*].

Financial results of the year 1906-07.

Divisions.	Timber and other produce removed from the forests by Government Agency.		Other Revenue.		Formation, protection and improvement of forests.	Total.	
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Andamans	6,03,890	2,58,528	5,503	1,000	15,500	6,09,393	2,75,028
Total	6,03,890	2,58,528	5,503	1,000	15,500	6,09,393	2,75,028

Appendix I.

Descriptive roll of elephants in the Andamans Forest Division on the 30th June 1907.

Serial No.	Name of Elephants.	Sex.	Height. Feet.	Height. Inches.	Date of receipt.	Estimated age on 31st March 1902, or on date of receipt, if received later.	Present age.	Number of years elephant has been working.	Condition.	Number of days. At work.	Number of days. At rest.	Number of days. Sick.	Cost price.	Remarks.
1	2	3	4		5	6	7	8	9		10		11	12
						Years.	Years.	Y. M.					Rs.	
1	Hannah ...	Female ...	7	8	Before July 1891	33	48	More than 16 0	Good	308	57	...	...	
2	Arnold (Tusker) ...	Male ...	8	8	Do.	41	56	Do. 16 0	Fair, old ...	218	70	77	...	
3	Bhairon Pershad (Tusker).	Do. ...	7	9	December 1895 ...	32	44	Do. 11½ 0	Good	300	65	...	3,488	
4	Australia ...	Female ...	9	1	Before March 1886	28	43	Do. 21 0	Good, strong ...	303	62	...	...	
5	Viper ...	Do. ...	7	9	Do.	36	51	Do. 21 0	Do. ...	230	76	59	...	
6	Lutchmi ...	Do. ...	7	¼	April 1891 ...	32	48	16 0	Good	296	61	8	3,025	
7	Sahpah (Tusker) ...	Male ...	7	10	March 1894 ...	33	46	13 0	Do.	266	99	...	3,538	
8	Bhokaung (Tusker)	Do. ..	7	11	Do. ...	36	49	13 0	Do.	283	82	...	4,088	
9	Shwe Daung (Tusker).	Do. ...	7	¼	Do. ...	34	47	13 0	Good, strong ...	250	80	35	3,238	
10	Paul (Tusker) ...	Do. ...	7	3	March 1895 ...	30	42	12 0	Good	261	104	...	3,763	
11	Adulphas (Tusker)	Do. ...	7	3	Before March 1886	23	38	More than 21 0	Good, fairly strong	280	65	20	...	
12	Pago	Female ...	7	6	March 1894 ...	32	45	13 0	Do. ...	280	60	25	2,713	
13	Wellington (Tusker)	Male ...	8	4½	Do. 1895 ...	35	47	12 0	Good, strong ...	271	71	23	3,855	
14	Maxie	Female ...	6	1	Born in January 1886.	6	21	6 0	Do. ...	293	72	...	...	Commenced work on 1st July 1902.
15	Oswald (Tusker) ...	Male ...	5	5½	Before March 1886	40	55	More than 21 0	Good ...	213	80	72	...	
16	Aurangabad ...	Female ...	7	3	May 1892 ...	17	32	15 0	Good, strong ...	281	67	17	2,530	
17	Jangi Puri ...	Do. ...	8	2	April 1891 ...	27	43	16 0	Do. ...	298	62	5	3,025	
18	Kate	Do. ...	7	¼	Before March 1886	22	37	More than 21 0	Do. ...	274	79	12	...	
19	Sundri ...	Do. ...	7	1	Before July 1891	56	71	16 0	.....	2	1	...	...	
20	Mahpah ...	Do. ...	7	6	March 1894 ...	31	46	13 0	Good ...	261	87	17	2,813	
21	Behram (Tusker)...	Male ...	7	10	December 1895 ...	28	40	11½ 0	Do. ...	291	56	18	3,365	
22	Goolabi ...	Female ...	7	8	March 1895 ...	40	52	12 0	Do. ...	248	76	41	2,605	
23	Diamond Jubilee ...	Male ...	...	...	Born in August 1897.	5	10	...	Do. ...	...	...	...	...	
24	Nineteen hundred...	Do. ...	...	...	Born in January 1900.	3	8	...	Do. ...	...	...	...	...	
25	Mabel	Female ...	8	1	11th February 1902	28	33	5 4	Fair	260	93	12	4,523	
26	Sooraj Mookhi ...	Do. ...	8	2	Do. ...	33	38	5 4	Good	276	68	21	4,523	
27	Lilly	Do. ...	8	2	Do. ...	30	35	5 4	Do.	306	59	...	4,523	
28	Raja Sheo ...	Do. ...	8	3	Do. ...	35	40	5 4	.....	...	1	2	4,523	
29	Gulbadan ...	Do. ...	7	9	Do. ...	26	31	5 4	Good, fairly strong	290	65	10	4,523	
30	Rani	Do. ...	8	1	Do. ...	30	35	5 4	Good	270	78	17	4,523	
31	Moti Mallah ...	Do. ...	7	6	Do. ...	25	30	5 4	Do.	305	60	...	4,523	
32	Delhi	Do. ...	7	8	Do. ...	26	31	5 4	Good, strong ...	267	70	28	4,523	
33	Meerut ...	Do. ...	7	10	Do. ...	27	32	5 4	Do. ...	285	68	12	4,523	
34	Bhola Nath (Tusker).	Male ...	8	2	28th January 1903	30	34	4 5	Do. ...	289	76	...	5,914	
35	Amir (Tusker) ...	Do. ...	8	...	Do. ...	23	27	4 5	Do. ...	248	88	29	5,915	
36	Gopal Dass (Tusker).	Do. ...	8	7	Do. ...	25	29	4 5	Do. ...	240	68	48	6,215	
37	Lutchmi Pershad (Tusker).	Do. ...	8	1	Do. ...	30	34	4 5	Good	300	65	...	6,415	
38	Sundar Pershad (Tusker).	Do. ...	8	8	Do. ...	25	29	4 5	Good, strong ...	265	81	19	5,915	
39	Singcour Pershad (Tusker).	Do. ...	8	11	3rd January 1905	30	32	2 6	Good, fairly strong	157	75	133	6,464	
40	Jamna Pershad (Tusker).	Do. ...	9	3	Do. ...	27	29	2 6	.....	126	42	19	6,464	
41	Ganga Pershad (Tusker).	Do. ...	7	11	Do. ...	25	27	2 6	Good, strong ...	268	84	13	6,464	
42	Panjey (Tusker) ...	Do. ...	8	7	26th April 1906...	28	29	1 2	Good	175	90	100	6,312	
43	Lancer (Tusker) ...	Do. ...	8	1	Do. ...	40	41	1 2	Good, strong ...	171	66	128	6,312	
44	Tupang (Tusker)...	Do. ...	7	7	Do. ...	28	29	1 2	Do. ...	207	56	102	6,312	
45	Fateh (Tusker) ...	Do. ...	8	...	Do. ...	38	39	1 2	Good	218	96	51	6,312	
46	Kawal	Female ...	7	4	Do. ...	38	39	1 2	Good, fairly strong	269	84	32	6,312	
47	Madhoo ...	Do. ...	7	7	Do. ...	23	24	1 2	Good	188	115	62	6,311	
48	Akbar (Tusker) ...	Male ...	8	4	Do. ...	40	41	1 2	.....	2	1	...	6,311	
49	Me Pu	Female ...	7	1	21st February 1907	50	50	0 5	Good, weak ...	102	38	...	4,972	
									Total ...	11,200	3,189	1,267		

1. Jamna Pershad died on the 14th January 1907. Received on the 3rd January 1905.
2. Akbar died on the 3rd July 1906. Received on the 26th April 1906.
3. Sundri. Let go as being past work.
4. Raja Sheo. Let go as being past work.

3

REPORT

ON

Forest Administration in the Andamans

FOR

1914-15, 1915-16 & 1917-18

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1916

Price Rs. 1-8-0 or 2s. 3d.

No. 389-F., dated Delhi, the 10th March 1916.

File No. 284 of 1915. Serial No. 2.

From—The HON'BLE MR. R. A. MANT, I.C.S., Secretary to the Government of India, Department of Revenue and Agriculture,

To—The Superintendent of Port Blair.

I am directed to acknowledge the receipt of your letter No. 2956-VII-22 of the 29th October last with which you submitted the report on forest administration in the Andamans for the year 1914-15.

2. The report shews steady progress in face of considerable difficulties, and the Government of India are pleased to observe that in spite of the falling off in the demand for timber caused by war conditions, the revenue derived from the forests, though slightly less than that of the previous year, exceeded the average of the past quinquennium. The Government of India desire to express their appreciation of the work done by Messrs. Grieve and Bonig and by the other officers mentioned by you.

3. I am to add that it would be more convenient if in future such matters as those referred to in paragraphs 4 to 7 of your letter under reply and in paragraph 5 of your letter No. 3154-VII-22 of 23rd December 1914 were made the subject of separate correspondence instead of being dealt with in your review of the annual forest reports.

438R&AD—300—25-3-14—GCBP Simla

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No. 2956-VII—22, dated Port Blair, the 29th October 1915.

From—Lieutenant-Colonel M. W. Douglas, C.I.E., I.A., Superintendent of Port Blair,

To—The Secretary to the Government of India, Department of Revenue and Agriculture, Simla.

I have the honour to submit the Annual Report of the Forest Department, Port Blair, for the year 1914-15, prepared by the Deputy Conservator of Forests, Port Blair, together with forms and appendices.

2. The survey of the Padouk forests of the Middle Andaman and of the adjacent island of Baratang to the South has now been completed at a scale of 2″ to the mile, and credit is due to Mr. Claudius of the Indian Survey Department and his assistants for the persistency of their efforts in the face of considerable difficulties. A start has been made in the direction of providing the Middle Andaman Island with roads.

3. The area under rubber has been raised to 335 acres and it is not proposed to exceed a maximum of 450—500 acres. The trees suffer at times from undergrowth owing to shortage of labour, but on the whole are doing well. Specimen biscuits made during the year were sold on the English market at the price of 2*s.* 1*d.* per lb., and as we are within measurable distance of regular tapping it will soon be necessary to obtain expert supervision.

4. The question of the extension to the Andamans of the Indian Forest Act raised in paragraph 4 of the Report can only be dealt with in general terms in a review of this description. The suggestion was made when the Inspector General of Forests last visited the Settlement, and the Deputy Conservator of Forests subsequently submitted a formal application to this effect, but for various reasons I was unable to agree to the proposal. Correspondence apparently ensued demi-officially between the Deputy Conservator of Forests and the Inspector General of Forests, and a copy of my decision was, after reference to me, forwarded to the latter. The Inspector General of Forests subsequently addressed me demi-officially.

The subject came before the Government of India in the Revenue Department in 1911. In his Inspection report of the year the Conservator of Forests, Pegu Circle, stated that no reserves had been gazetted under the Indian Forest Act and that as the Local Government, as represented by the Chief Commissioner, has power to disforest a reserve under the local regulations, it was desirable to extend the Act, and thus transfer such power to the Governor General in Council. No particular reasons were advanced. The Chief Commissioner pointed out that the Indian Forest Act was not in force in the Andaman and Nicobar Islands, that Forest Rules had been framed to suit local conditions, and that it would be inconvenient to have two regulations dealing with forest matters in force at the same time. The Chief Commissioner observed that occasions on which reserved forests had to be disforested, owing to the extension of the Settlement, were very rare, and that there seemed to be no reason for the amendment of local regulations. In Revenue Department letter No. 844-F, dated the 15th September 1911, paragraph 3, the Government of India agreed with the Chief Commissioner.

A., Sept. 1911, Nos. 13 to 15, (F. 234).

A., Sept. 1911, Nos. 13 to 15, (F. 234).

A., Sept. 1911, Nos. 13 to 15, (F. 234.)

5. The administration of the Andaman and Nicobar Islands is governed by Regulation III of 1876, of which the Andaman and Nicobar Manual is an amplification issued and amended from time to time under the authority of the Government of India, and locally having the force of law. Different forms of legislation have been considered from time to time, but it has been finally decided to leave the question for disposal, when the general scheme of the management of prisoners sentenced to transportation is considered by the Jails Commission. The administration of the Settlement forests is governed by clauses 10 and 12 of the Regulation, and by Chapter XXIX of the Manual. The significance of clause 4 of the Regulation is especially relevant in considering any new legislation connected with the "Status of land or the Products thereof". The entire area is owned by the State, and no right of any kind may be created without an order by the Governor General in Council. Further,

no inhabitant can hold land as a tenant; the only form of tenure is that of a license for five years terminable at a year's notice. Then again the population consists of free persons, cultivating convicts, and labouring convicts. Cultivating convicts are issued licenses to cultivate, but are liable to be returned to labour as a form of punishment. Free persons are required to obtain licenses annually permitting them even to reside in the Andamans. It is obvious that in a tract in which the Government of India reserves for itself such autocratic powers in regard to residence and to land tenure legislation can be conducted on simple lines, and that an Act of the nature of the Forest Act can have but limited local application. The reservation and protection of forests is not required in the sense contemplated therein, and in a Settlement of this description it would be undesirable to invest Forest Officers with powers other than those which they exercise as Settlement Officers. The power to compound offences, for instance, has been applied for, but seeing that every resident not a labouring convict is practically on permanent security for good behaviour, it is preferable that every case shall be tried and be appealable to the highest authority. In practice eight forest offences are on an average committed annually. The forests are in charge of a Deputy Conservator of Forests under the orders of the Chief Commissioner, and expert advice on technical matters is given by the Inspector General of Forests who will endeavour to visit the Settlement every second or third year. Rules are made (in Chapter XXIX) (1) for the issue of licenses to fell trees and take produce, (2) for the formal reservation of certain areas mostly covered by evergreen forest and used for fuel, (3) for the punishment of offenders, and (4) for the regulation of the import and export of timber. No difficulties have so far arisen in connection with the enforcement of these rules, and they suffice for local needs. They can of course be amplified at any time at the instance of the Forest Officer.

A. June 1914, Nos. 1 to 3, (F. 135).

6. The reasons advanced by the Deputy Conservator of Forests for the immediate amendment of the Rules and of the Regulation are the following :—

(1) The probable changes in the administration of the Settlement.

(2) The probability that the North and Middle Andamans will be leased during 1916.

(3) The hope that villages may soon be established in Middle Andaman.

The fact that the entire administration will shortly form the object of enquiry by a Commission, and may possibly be entirely transformed, makes it obviously undesirable to introduce drastic reforms at this time. Measures are in train for the lease of the North and Middle Andamans, but so far no offers have been received, and it is possible that none will be forthcoming during the continuance of the war. Whether the forest tracts in these islands are leased, or are worked directly by Government, the North and Middle Andamans will doubtless be declared a Settlement under a Regulation similar to that of 1876, so long as a convict Settlement is maintained at Port Blair. Lessees if forthcoming will be termed licensees under Regulation III of 1876, as is already provided for in the draft Agreement. Other schemes, moreover, are under consideration by the Home Department. (1) The formation of Settlements of criminal tribes, (2) the founding of a new Settlement for released convicts, (3) the reservation of a special tract for the Andamanese in order to preserve them from extinction ; and in the present state of uncertainty as to the future, a general extension of the Forest Act over the whole or even a part of these islands would be injudicious, apart from the material point as to whether the Act is required at all.

With regard to the Forest villages I gather that the Deputy Conservator of Forests contemplates a scheme of forest villages scattered throughout the forests, each village responsible for the working of a certain forest tract, conditions which prevail in India in parts where there are primitive forest tribes. In the Andamans, the only people who can be enlisted for such a venture are the convict-bred residents of the Settlement, a class which is unreliable, indolent, and accustomed to the comforts of civilisation. There is ample paddy land for their cultivation and the proportion of women to men is as one to five. It is not likely that they will migrate from the Settlement

and found solitary villages in the Andaman forests. An effort is to be made to induce them to work for a few months on favourable terms as labourers, which I hope may succeed; but in the past such overtures have been invariably rejected. I agree with Mr. Grieve that Settlements of this description afford the solution of the labour difficulty, *provided that people accustomed to the conditions of forest life can be obtained,* and I have alternative proposals, but it is useless to elaborate them until the commission comes into being:—

7. Briefly stated my views are as follows:—

(1) The peculiarity of the conditions of residence, and of land tenure, in force in the Settlement of the South Andamans renders the greater part of the Forest Act inoperative. No right can exist, no public interference is possible; and control and preservation of Forest areas can be more conveniently achieved by means of local rules adapted to local conditions than by the introduction of the Indian Forest Act.

(2) In an isolated Settlement of this description in which the entire authority, Departmental and Executive, is centralised in the hands of one officer, it is preferable, in the interests of discipline and also of the local population, all of whom are on some form of security for good conduct, to administer through the agency of a self-contained Regulation rather than by a number of independent Acts.

8. The fuel supply is also referred to in paragraph 4 and a suggestion is made that an area sufficient to permanently supply the fuel requirements "should be set aside on a permanent basis." The present average consumption is obtained from the annual clearing of about 120 acres. There are already 54,666 acres of reserved forest the greater part of which is only fit for fuel, and there is enough fuel in the vicinity of the base of the tramway line to supply local needs for several years. In paragraph 46 it is stated that "the new Sawmill is expected to give a much larger supply of firewood." It has been questioned in the past whether it would not be more profitable to grow Eucalyptus and *Albizzia*, both fast-growing trees near the line rather than remove the latter should the supply in its vicinity prove inadequate. Secondary growth is now held to be suitable and it is difficult to conceive any danger of shortage, seeing that it clothes the hill sides in all directions and its period of rotation is approximately fifteen to twenty years. The transfer of the line would present no great difficulty. The working plan of the cocoanut extensions aims at a moderate area of only 2,000 acres none of which has been so far taken from any fuel reserve, nor is likely to be so taken. All officers have recently been provided with accurate maps on which forest boundaries are shown, and the reserved area cannot be encroached upon without the sanction of the Chief Commissioner and Superintendent. If a portion of a reserve were to be required for the founding of a village owing to the expansion of the Settlement, the case would be fully considered by a Committee of which the Deputy Conservator of Forests would be a member. It does not seem therefore that the fuel reserves are in any danger of depletion or encroachment and that any special measures are called for. It is possible moreover that the fuel demands will be largely diminished as a result of the labours of the Commission.

9. The labour difficulty referred to in paragraph 85 of the report is undoubtedly serious, and has been complicated this year by unprecedented sickness and other causes connected with the war. The distribution rests with the Deputy Superintendent who has to deal equitably with the insistent demands of all Settlement and Departmental officers. The Forest Department is given preferential treatment in that it receives the fittest physically, and no questions are asked as to whether the convicts are suited by antecedents to forest life, or whether they might not be better employed industrially. In times of shortage the Forest Officer has to economise and Public Sales have to give way to the needs of the Settlement. The more important question of principle in the allotment of labour has not met with the consideration it deserves.

The main objects of transportation are the discipline and reform of convicts and their instruction, if possible, in some form of industry, and the financial advantages reaped by Government as a result of their employment must always be a secondary consideration. The conditions which have hitherto prevailed in Forest Camps are not altogether satisfactory. Convicts are at times scattered without sufficient control, the medical supervision is inadequate, men are drafted into forest files who are not inured to the life and the sick rate is often high. To the departmental officers of the Settlement this side of convict administration is usually a matter of academic interest, and a convict is merely a labourer from whom the fullest value must be obtained. Settlement officers see the wider aspect and in some cases hold strong views on the subject. The pertinent question arises why should convicts be drafted into distant forest camps regardless of their fitness for forest life, when equally or even more profitable employment can be found in the Settlement, where supervision is easier and discipline more readily maintained. The question of the extent to which the conditions of forest employment are or can be made compatible with convict reform will doubtless be examined by the Jails Commission. Various matters connected with the system of convict administration have been recently considered by the Home Department and certain reforms introduced. The forest case will now be taken up and endeavours be made to assimilate the conditions of Forest Camps more nearly to those prevailing in the Settlement.

10. In paragraph 51 the Forest Officer states that a cleared fuel reserve of 140 acres in the vicinity of the Settlement was not planted up with teak "owing to the impossibility of getting a guarantee that these areas should remain permanently under forest". Such a guarantee could not be advisedly given even by the Government of India, for no one can foresee the ultimate trend of Government policy with regard to land in the vicinity of the Settlement; and a forest officer who grows teak or padouk on such lands, capable of producing rubber, cocoanuts or any cereal obviously incurs risks. Some 1,750 acres have been planted with timber on fertile land in the middle of the Wimberley Ganj valley and within easy reach of sea transport—plantations moreover which absorb labour and will hardly repay the cost of maintenance. Should it be decided, as a result of the Jails Commission to close the Settlement it is probable that this entire valley, containing these plantations and other areas under cocoanuts and rubber, will be placed on the market, or formed into an agricultural colony. Planters will hardly grow teak and padouk on land capable of producing rubber or cocoanuts, and the plantations will doubtless be cleared.

If another alternative is adopted of populating the Settlement with villages of self-supporting convicts, drafted from India, more land in the vicinity of the Settlement will be required, and it is conceivable that encroachment may have to be made on areas at present reserved as forests and even covered by young timber.

It can never be safe to guarantee forest areas from disturbance in the vicinity of any expanding community, and in the present phase of uncertainty it is obvious that no such assurance is conceivable.

11. Mr. Baker held charge for nine months of the year and efficiently administered the department. He received invaluable assistance, as usual, from Mr. Bonig.

Mr. Grieve has taken up his new duties with characteristic energy.

Messrs. Brown and Parkinson both deserve commendation, the former for his efforts in supervising the rubber plantations, the latter for valuable botanical work for which he has special qualifications.

REPORT

ON

FOREST ADMINISTRATION IN THE ANDAMANS

FOR THE YEAR

1914-15.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

SECTION 1.—ALTERATION IN AREA. (FORM NO. 7.)

1. An area of 120 acres was excluded from the Goplakabang reserve during the year. With this exception, there has been no change from last year.

2. Five hundred and eighty-five acres of unclassed forests are reported by the District Officers to have been cleared for cocoanut plantations and cultivation in the South Andaman Settlement.

SECTION 2.—FOREST SETTLEMENTS. (FORM NO. 8.)

3. No area was declared Reserved forests during the year.

4. The question as to the necessity or otherwise of placing the legal status of the forests, of these Islands upon a more permanent basis is under consideration. At present the provisions of Regulation III of 1876 are the only law that applies to them. This state of affairs has hitherto been of small importance, but in view of (1) the probable impending changes in the policy of the Government of India with regard to these islands, (2) the probability that the North and Middle Andaman will be leased out in 1916, and (3) to the fact that with the opening out of the Middle Andamans by roads and, (it is hoped) by the introduction of forest villages, this is no longer the case. The unclassed forests will shortly cease to be areas of uninhabited jungle, and consequently a better defined legal status now appears to be called for.

It seems desirable that an area sufficient to permanently supply the fuel requirements of the Settlement should be set aside on a permanent basis. The annual indent of Settlement fuel has risen considerably, and with the large areas of land recently cleared for cocoanuts, and cultivation, the tendency will be for the sources of fuel to become more and more remote, resulting in the supply of that commodity becoming more expensive in transport and labour.

SECTION 3.—DEMARCATION (FORM NO. 9.)

5. During the year the boundary lines of Alimasjid and Dhani-Khari Blocks, aggregating 12 miles were cleared, and stone pillars erected on them at a cost of R62.

The total length of boundary remains at 136 miles, of which 86 miles are natural and 50 miles are demarcated.

SECTION 4.—FOREST SURVEYS. (FORM No. 10.)

6. The Superintendent, Eastern Circle, Survey of India, deputed a detachment of 8 Surveyors in charge of a Provincial officer to continue the survey of the Middle Andaman and Baratang Island. They arrived here on the 22nd October 1914 and left on the 24th April 1915 after completing the work for which they were detailed.

An area of 225 square miles was plane-tabled at a cost of R25,553 during the year. The work was carried out in face of considerable difficulties arising from want of water and Jarawas, indeed 1 constable of the Police guard which accompanied the party was wounded by the latter. Great credit is due to Mr. Claudius, who was in charge of the party, and to the surveyors that they continued their work undeterred by this attack of the Jarawas.

7. A skeleton survey on the scale of 2″=one mile has now been made of the padouk bearing forests of the Middle Andaman and the whole of Baratang Island. A similar survey of the evergreen Forests of the Middle Andaman comprising one-third of the total area is not required at present but it is hoped that the North Andaman will be surveyed at an early date.

8. The expenditure of the year was R25,553 and the total cost for survey up to the end of the year was R59,054.

9. The total expenditure on the constitution of State Forests was R25,615.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

SECTION 1.—REGULATION OF MANAGEMENT.

(*a*) *Preparation and control of Regular working-plans.* (*Form No. 11.*)

10. The working plan report was submitted to the Inspector General of Forests. During his visits in April last, the first proof was carefully gone over and in May, the plan as it will finally stand was submitted to the Printers. The proofs have not been received up to the time of writing. R300 was spent upon the working plan during the year.

(*b*) *Preliminary Working plan reports.*

11. The exploration of the little Andaman remained in abeyance, owing to more important duties fully occupying the time of the controlling staff.

(*c*) *Annual plan of operations.*

12. Owing to all the available staff and labour being engaged on the survey, it has not been possible to do more than the absolutely necessary work of fulfilling contracts and supplying the Settlement requirements. Indeed several profitable contracts have had to be let go, owing to the claims of the latter.

SECTION 2.—COMMUNICATIONS AND BUILDINGS (FORM NO. 12.)

(*a*) *Roads and Bridges.*

13. The Wimberley Ganj tramway.—The total length of permanent way remained unchanged at 6 miles with 36 masonry and 25 wooden bridges and one corrugated iron culvert. 76 wooden girders in bridges on the permanent line have been replaced with new girders of *Mesua ferrea* (Gangow). 8,066 wooden sleepers have been renewed on the permanent line, in addition to the ballasting of ¾ mile with hard stone.

The rolling stock consists of two locomotives (one belonging to the Settlement), 49 large and 15 small wooden trucks, and 9 iron trucks.

There was no derailment during the year.

Four thousand two hundred and sixteen cords of fuel were extracted at a cost of R27,118 and sold for R16,864 against 4,339 cords in the previous year which were carried over the line. The slight falling-off is on account of the fuel cutters having been employed for 2½ months on rubber extension work.

14. The expenditure on maintenance of the permanent line was R869 as against R1,407 in the previous year.

15. *Temporary lines.*—There were 4·50 miles at the close of the year as against 4·81 miles in the previous year, while the expenditure incurred on maintenance, lifting and laying was R958 as against R1,059 incurred last year. This sum has, as usual, been charged under fuel extraction, as has the cost of up-keep of fuel shoots, of which no new ones were made during the year. Owing to the recent concentration of the felling areas, the future expenditure on up-keep is expected to decrease.

16. A commencement has been made in permanent roads in the Middle Andaman: and by the end of June, the alignment (three miles) of the first section of a road which is intended ultimately to be carried through to Stewart

Sound, (20 miles) with a branch to Lowis Inlet on the west coast was completed. In the event of the North Andaman being leased out, this road will save the running of a dâk launch up to Stewart Sound : as the Rosamond will, for some 2 years, have to make frequent trips to Long Island, from near which place it will be possible to send letters overland. It is found that a road laid with a maximum gradient of 1 : 21, soled 3″—and metalled 6″—deep to a width of 8′, with 8′ wide bridges costs approximately R1,000 per mile with labour reckoned at R0-5-0 per day. This expenditure has so far been charged to extraction.

(*b*) *Buildings.*

17. *Permanent buildings.*—The construction of new quarters for the Deputy Ranger, Revenue Range, was started and a sum of R7 spent on it. A permanent Rest House for Forest Officers was begun at Bomlungta and R51 spent. It was completed just after the close of the year. The house of the Assistant Forest Officer at Wimberley Ganj was reconstructed at a cost of R2,420.

A permanent quarter for a clerk at Wimberley Ganj was constructed at a cost of R78.

18. *Repairs.*—The Divisional Forest Officer's head quarter bungalow and out houses were repaired and repainted for R1,482, Forest Office R74, Extra Deputy Conservator of Forest house at Chatham R25, Ranger's quarter at Haddo R51 and convict barrack at Wimberley Ganj R1.

19. The total expenditure charged in Form No. 12 is R4,189.

20. *Temporary buildings.*—These consist of Kutcha huts at Forest camps for the forest staff police and working convicts, a total sum of R701 as against R706 in the previous year was incurred and this was charged to the departmental extraction of timber and fuel.

21. It is most unfortunate that the building of new quarters sanctioned for the office staff has again been unavoidably postponed. These men now live in various parts of the Settlement, in many cases very far from their work—an undesirable state of affairs.

(*c*) *Miscellaneous works.*

22. No work was done during the year under report.

Section 3.—Protection of Forests.

(*a*) *General Protection.* (*Form No. 13.*)

23. There were 10 cases of unauthorised felling reported involving 16 men who were prosecuted as against 10 cases involving 16 men in the previous year.

In 6 cases involving 14 persons one self-supporter convict was reduced to labouring convict, one was fined R13-8-0, one was fined R12-3-0, four were fined R2 each, one was fined R0-8-0 and three were fined R2-12-0 each and three others were acquitted.

Another case resulted in the acquittal of 2 persons.

(*b*) *Protection from fire.*

24. No fire occurred during the year.

(*c*) *Protection from cattle.* (*Form No. 16*).

25. The number of cattle impounded was 267 as against 347 in the previous year. The cases nearly all occurred in the padouk plantation of 1911 as this plantation adjoins the village grazing grounds.

About 343 square miles in the South Andaman are nominally open to grazing.

(*d*) *Protection against injuries from natural causes.*

26. *Damage by insects.*—Some damage was done to the young plants in the plantation of 1913-14 and to the Eucalyptus nursery.

27. *Wild pigs.*—Considerable damage has recently occurred both to the young rubber plants, as well as to the cocoanut plantation in Long Island. A certain number of pig have been trapped by Burmans employed for the purpose, and gabions have been put round the young rubber plants.

28. *Climbers.*—These are very troublesome in all young plantations if not kept back by continual weeding and cleaning. Padouk trees also suffered badly from heavy climbers which tend to break the branches and so let in rot.

29. *Wind.*—The few teak plants in Long Island have suffered considerably from wind. The growth of the teak being extraordinarily rapid, and its young leaves being very large, cause the plant to sway heavily in a wind. The result is a tendency to throw out branches, and secondary stems, from the lower stem and branches, and loosened roots. Wind will probably be a serious factor to contend with in the making of teak plantations, consequently sheltered localities must be chosen, or belts of natural forest left as screens.

Section 4.—Sylviculture.

(*a*) *Natural reproduction.*

30. In a sample plot made in Bom-Lungta, the ground was cleared of jungle under each sample padouk tree: and a considerable amount of germination has resulted. An attempt was made to open out the jungle round each tree in the felling coupes, but this had to be abandoned. As usual in this division, little could be done as there is no labour available.

31. The natural reproduction of gurjan in a sample plot in Wimberley Ganj is extremely promising. It will probably be found to be good over large areas of forest. Except to a trained botanist, the gurjan seedlings are not easy to distinguish in the mass of prevailing evergreen undergrowth and doubtless for this reason nothing has hitherto been remarked on its reproduction.

(*b*) *Artificial reproduction.* (*Form No. 18.*)

Regular plantations.

32. *Mangroves.*—No additions were made to these plantations during the year, their area remaining at 685 acres.

33. *Rubber.*—(*Hevea brasiliensis*).—During the year 143½ acres of rubber were put out, bringing the total area to 335⅙ acres. Planting operations were greatly delayed by the unusually late arrival of the monsoon, so that a considerable area of ground cleared and prepared for the purpose was not actually planted by the end of June. In addition to the above 3,888 vacancies were filled in.

The plants are usually put out 22′ × 22′ apart, giving 104 trees to the acre. Generally speaking the whole plantation presents an appearance of vigorous growth and looks extremely promising. Measurements taken at the end of June 1915 shew that trees grown from stumps put down in 1914 were from 10′-14′ high, while those raised from seedlings in baskets were 9′-13′ high in the same period.

34. There are three nurseries which are all doing well. The germination of seed received in 1913 was only about 30 per cent. whereas the Singapore seed received in April-May 1915, gave about 70 per cent.

35. A sum of R13,655 was spent on the rubber plantation during the year. The total cost of formation and up-keep to date works out at R110 per acre.

36. No tapping was done during the year but 160 lbs. para rubber biscuits sold during the year by Messrs. Lewis and Peat, Mincing Lane, made *2s.* 1*d.* per lb. The rubber market has improved by some 4*d.* per lb. so that there is every prospect of the estate being a financial success.

37. *Afzelia and mahogany.*—The area is the same as last year, *viz.* 8 acres.

No sylvicultural operations were necessary. On the whole, I do not think it is advisable to continue putting out more of these exotics.

38. The area of old teak and padouk plantation in the Goplakabang valley (1883-1890) was reduced from 128 to 122 acres, 6 acres of 1885 padouk plantation were disforested and planted with rubber. The old lines of teak and padouk which were planted in the Ali Masjid reserve during the years 1892, 1893 and 1894, area 1,270 acres, have been cleared at a cost of R207, and again brought on to Form No. 18.

Cultural Operations.

39. The total area of padouk plantation from 1903 to 1911 was 1,300 acres at the beginning of the year from which two acres were excluded from 1906 and 20 acres from 1909 plantations for rubber. There are 1,278 acres of these plantations at the close of the year as shown in Form No. 18.

The areas of 1905, 1908, 1909, 1910 and 1911 were cleaned over during the year at a cost of R454.

40. The padouk area sown broadcast in 1912 was burnt and cleared at a cost of R18. The area of this plantation given in paragraph 44 of last year's report is 100 acres, but after re-computation, it was found to be only 20 acres, consequently the excess 80 acres has been excluded from Form No. 18.

41. The teak and padouk area of 1913, 33½ acres was cleared and burnt and sown with teak 24′×3′ apart whilst padouk with a little Koko seed was sown broadcast between the lines. The growth of the teak has been extremely rapid, some plants shewing a height and girth growth of 25′ and 9″ respectively. The teak lines shew a general height growth of 30 per cent. to 50 per cent. more than the surrounding padouk.

42. The teak and casuarina area of 1913, 52 acres in extent sown with teak in lines 12′×6′ apart with alternating lines of casuarina 12′×6′ apart was put out on gurjan or evergreen forest land. The casuarina has not been a success, but the teak has established itself and now averages some 10′ in height. While not shewing the phenomenal growth of the first area, it is evident that this class of soil is capable of producing a good quality of teak.

43. In 1914, an area some 80 acres in extent was put out in a similar manner to the 33 acres in 1913. Parts of this area were densely covered with grass and there the teak has not done so well. Over the rest of the plantation, the teak is doing well. It is not proposed to continue this method of putting out teak in lines 24′×3′ apart. With the extraordinarily rapid growth which the plants exhibit, it is clear that in 3 or 4 years, about half the plants in the lines will have to be removed; and they will in that time have no commercial value. In Burma I understand that teak is put out 6′×6′ apart, and in future, taking this figure as a guide and considering the very rapid growth of the plants, it is probable that teak in lines of 8′×8′ apart will produce the best results.

44. A total sum of R830 was spent on cleaning and weeding these plantations during the year. This includes a trifling sum spent on paths which were made while this work was progressing.

(*c*) *Operations for the improvement of the growing stock.*

45. Creeper cutting was carried out in Middle Andaman padouk forests at a cost of R374, more extensive work under this head being impossible owing to want of labour. Similar work was done in the old Manglutan padouk plantation at a cost of R284.

(*d*) *Experiments.*

46. An area of 15 acres was planted out with four species of Eucalyptus, with a view to the future fuel supply. As the new Sawmill is expected to give a much larger supply of firewood than the present mill, and as the secondary growth of forest produces material quite sufficiently good for the ordinary wants of the Settlement, providing that a suitable area is reserved for its supply, there does not appear to be any necessity to continue this expensive method of obtaining firewood.

47. *Albizzia moluccana.*—Trees obtained from seed sown in December 1912 have obtained a maximum height of 28 to 30 ft. and girth of 3′. It might pay to grow this species on a very short rotation to supply packing cases and the like. Enquiries are being made as to the value of the wood for this purpose.

48. The girdled gurjan trees referred to in paragraph 51 of last year's report crack very badly indeed if left on land for a long period after felling. It is clearly proved that the logs should be put into the sea as soon as possible after being felled.

Section 5.—Exploitation.

(*a*) *System of management.*

(i) *Major Forest Produce.*

49. *Unregulated fellings* were carried out up till the end of January 1915 in the following localities—Havelock, Peel, North Passage, Colebrooke Islands, and in the Middle Andaman between the Boroin and Yol streams. In addition, a certain quantity of timber derived from clearings for cocoanut plantations on Long Island and at Port Mouat was extracted.

50. After January 1915, *Improvement fellings* as prescribed by the Working Plan were undertaken.

Owing to the uncertain state of the market, the suggested leasing out of the North and Middle Andamans to private enterprise was postponed for a further period, and this necessitated a change from the prescribed order of working the compartments. Fellings by departmental agency were consequently carried out in compartment 30 (Rangat) and in compartments 31, 26, 27, and 29 in the Bomlungta catchment area, where 3,423 Padouk, 1,152 Pyinma and 625 Koko were marked.

Owing to shortage of elephants it is unlikely that extraction can be completed over more than about $\frac{2}{3}$ of this area.

The numbers of sound and unsound padouk approximately coincide with the forecast made in the Working-Plan, whereas the unmarketable padouk, comprising stems so defective that their extraction does not pay, were found in considerable excess. Owing to this, it is improbable that more than about $\frac{4}{5}$ of the estimate framed for the use of prospective lessees, will be obtained.

51. *Fuel*—About 140 acres of forest were cleared to provide fuel for the Settlement. This clearing was not planted up with teak as contemplated by the Working-Plan owing to the impossibility of getting any guarantee that these areas should remain permanently under forest. A proposal to establish a permanent fuel reserve on the North-Eastern slopes of the Mount Harriet Range is under consideration.

52. *Charcoal*—Was obtained from Chirya Tapu and Long Island. Henceforth it will be manufactured during the dry weather only, as the wastage during the rains is found to be very heavy. A patent retort has been ordered, by the use of which a considerable improvement in charcoal will, it is hoped, be obtained.

(ii) *Minor forest produce.*

53. *Canes*—Were cut from Havelock and the Middle Andaman, and at the end of the year from Shoal Bay. From the latter camp, the produce is transported by the Tramway *viâ* Wimberley Ganj which greatly facilitates the supply.

54. *Mangrove* and *T. procera* bark was supplied from Shoal Bay up till January 1915, when the Petty officer in charge of the file was killed by Jarawas, and the file was then moved. The bark is now provided by the Settlement.

(*b*) *Agency of Exploitation.*—(*Forms 19 and 20.*)

(i) *Departmental Agency.*

55. The greater part of the timber and fuel extracted was, as usual, by departmental agency. The following are the percentages:—

Timber 87% by volume against	87% last year.
Fuel 63%	65% „ „
Minor produce 10% by value against	22% „ „

The chief difference is in minor produce, and arises from the fact that the Settlement now make their own arrangements for the collection of mangrove bark.

56. *Major produce.*—The following quantities of timber shipped during the year compare with those of the preceding year as follows :—

Timber.	1914-15.	1913-14.	Difference.
	Tons.	Tons.	Tons.
Rough hewn padouk	2,314	3,732	−1,275
Do. pyinma	171	143	+28
Millsawn gurjan	646	1,293	−647

The large decrease in the quantity of padouk squares sold is mainly due to the fact that under the Working Plan a large number of logs fit for sawing purposes are now extracted whereas formerly, practically sound padouk only was brought in. The loss of three good elephants during the year has also seriously affected the outturn.

The gurjan market went to pieces owing to the war, and less timber was sold in consequence.

57. *Fuel.*—Four thousand six hundred and fifty seven cords were supplied to the Settlement against 4,545 cords last year. Local requirements are likely to increase, rapidly, owing to the less consumption of coal.

The Rosamond and other launches used 1,683 cords of which 225 cords were cut in the forest camps and 729 cords from Sawmill wastage. The tramway used 112 cords, and the Sawmill furnaces consumed 672 cords against 715 used last year. A very large percentage of this will in future be available for the Settlement supply, as the Sawmill Engineer has readjusted the furnaces to consume more sawdust.

58. *Charcoal.*—Six thousand and eight maunds were supplied to the Settlement against 3,921 maunds last year. The reason for the large increase is that the whole supply of the Settlement was completed in May and is not manufactured monthly as heretofore.

59. *Minor produce.*—Cane was supplied for the local manufactures of the Jail and Workshops as usual.

60. *Transport by land.*—The extraction of all timber from the forests is done by elephants. The output of timber possible is therefore directly proportional to the number of elephants available. The necessity for an immediate increase in the number of departmental elephants is clear for the number at present in use can extract no more logs than will keep the present mill working to its full capacity.

With the advent of the new mill, there will be twice the present saw capacity to cater for: and although owing to the fact that gurjan with which the mill will chiefly be concerned is more plentiful and more gregarious than padouk, and an elephant will be able to extract a larger tonnage; even so, an annual increase of four or five elephants to bring the herd up to about 60 will have to be contemplated.

A list of elephants with details of the work done and the condition of each is given in Appendix I. There have been some serious casualties during the year; "Kawal" died of exhaustion due to her inability to take food owing to an ulcerated throat: and "Tupong" probably died from the same cause but no *post mortem* examination was held. "Lachmi-Prosad" went *musth* early

in the year, and broke away with a chain round his leg. When caught, the chain had galled his leg badly and this had become fly-blown, with the result that the heel tendons are practically destroyed. He was one of the best dragging elephants in the Department, and will in future only be of use for turning logs. "Viper" and "Jangipuri" and "Mepu" are very old and almost useless, and are to be struck off the effective roll. The two latter have lost their molars and cannot masticate their food properly. "Sundra Mala" and "Meg Mala," two young females bought in 1911 are even now too young to do a full task in dragging.

61. The fuel for the Settlement is brought down over the Wimberley Ganj Tramway.

62. *Transport by water.*—For the first time in the Andamans, use has been made of the freshets in the larger streams to float down timber. This has been accomplished by keeping a lot of logs ready near the stream. As soon as a flood is about to come down, these are pushed into the water and caught by means of a boom made of "pepita" logs lashed together and anchored to trees at either end. Logs were brought some three miles down the Bomlungta stream, a very great saving in dragging power being thus effected. Great credit is due to Mr. M. C. Bonig for the idea and successful construction of the boom.

63. The girdling of gurjan has also rendered that wood buoyant in sea water, and by this means a great saving of labour in rafting work has been effected.

64. The Rosamond brought in 7,254 tons of timber against 10,628 last year. Her long absence in Rangoon largely accounts for the difference. The S. L. "Eileen" towed rafts amounting to 1,907 tons, bringing the total amount of timber carried to Port Blair to 9,161 tons against 11,213 tons last year.

65. The total revenue of the year from produce extracted by departmental agency was R3,89,977, against R3,98,104 in 1913-14.

(ii) *Purchasers.*

66. *Major produce.*—The revenue from standing timber sold to purchasers fell to R3,067 from R6,779 in 1913-14. This large drop is partly due to the disorganisation of the gurjan market by the war, and to the granting of 11,357 c. ft. at half royalty rates resulting in a diminution of R1,064.

Fuel.—The revenue amounted to R96 against R122 last year; the decrease being due to the department having supplied the police during part of the year instead of the private purchasers who usually do so.

Bamboos produced R43 against R36 last year. Minor produce yielded R282 against R290 in the previous year.

The total revenue derived from all forest produce removed by purchasers amounted to R3,488 against R7,227 the previous year.

(iii) *Rights and privileges.*

67. There are no right holders. The estimated value of produce removed by District Officers and privileged villagers was R14,272 as against R14,086 the previous year.

(iv) *Free grants.*

68. Officers of the Settlement cut and utilised fuel free of charge for convict bhandaras in some stations: for Tea Garden 314 cords and for other stations 1,698 cords, total 2,012 cords against 1,552 cords in the previous year.

Free grants of sawn timber 18 cubic feet valued at R24 were made to the Gymkhana Club.

Free grants of timber as samples were made to :—

			R
Commander of S.S. "Pacific Transport"	45 c. ft.	valued at	38
Messrs. George Black and Son, London	240 „	„ „	168
Forest Economist, Dehra Dun	120 „	„ „	84
Messrs. Richard Wade and Son	24 „	„ „	28
„ Ransome & Co., London	186 „	„ „	105

69. The following table shows the quantity and value of all forest produce removed free of charge from the forests by District Officers and villagers :—

	Timber.		Fuel.		Bamboos.		Other minor produce.	Total.
	c. ft.	value.	c. ft.	value.	No.	value.	value.	value.
		R		R		R	R	R
Right holders .	...	...	...	...	...	...	...	...
Free grantees . .	54,109	1,421	391,360	9,784	586,291	366	2,701	14,272
Grant at reduced rates.	...	...	...	...	...	...	...	...
TOTAL .	...	1,421	...	9,784	...	366	2,701	14,272

(c) *Outturn and Sources of Forest Produce.—(Form Nos. 19 and 20.)*

70. The following table compares the outturn of the year classified according to the agency of exploitation and the kind of produce extracted with the figures of 1913-14.

		Timber.	Fuel.	Bamboos.	Minor produce.
		C. ft.	C. ft.	No.	R
Government Agency . .	1914-15	563,092	702,227	148,234	303
	1913-14	612,667	724,464	60,473	1,079
Purchasers . . .	1914-15	29,181	13,360	80,300	282
	1913-14	30,622	25,920	57,600	290
Free Grantees . .	1914-15	28,800	230,400	384,000	2,448
	1913-14	29,880	239,040	398,400	2,540
District Officers . .	1914-15	25,309	160,960	202,291	253
	1913-14	34,802	124,160	276,617	751
TOTAL .	1914-15	648,753	1,106,947	814,825	3,286
	1913-14	707,971	1,113,584	793,090	4,660

The decrease in the outturn of timber extracted by departmental agency was mainly due to a reduction in the number of working elephants.

The decrease in the fuel removed by departmental agency was due to there being a large stock of fuel at the beginning of the year and the Rosamond obtaining most of her requirements from the sawmill instead of from the out camps.

The increase in bamboos was due to more being cut for making gabions for the rubber plantation and to more being required by the Settlement.

The decrease in minor produce was due to less bark being collected for local tannery.

With regard to produce extracted by the purchasers the decrease under timber, fuel and minor produce is due to less demand by the free residents and an increase in bamboos is due to more demand by the villagers to repair their dwelling houses.

The decrease in the produce removed by the free grantees is due to there being fewer houses than in the previous year.

The decrease under timber, bamboos and minor produce removed by the District Officers is due to less materials having been extracted for temporary buildings and the increase in fuel is due to there having been more jungle cleared by them for cocoanut plantations.

71. The following table shows the timber in the round supplied to the Chatham Sawmill and the outturn obtained :—

Year.	Timber sent to sawmill.		Timber received from sawmill.	Percentage of loss in conversion.
	No. of logs.	Volume.		
1914-15 . .	6,446	305,855	126,041	59
1913-14 . .	6,556	353,104	153,267	56

The high wastage is partly due to no shingles having been cut during the year. Wood fit for shingles was converted into fuel. Wastage must, however, always be high, owing to the crooked and hollow nature of growth of padouk.

72. The total expenditure on the management of State forests during the year was R1,68,092, against R1,86,267 last year.

CHAPTER III.

FINANCIAL RESULTS (FORM Nos. 21 TO 27).

73. The income and expenditure of the year are compared with that of the previous year and with the average of the preceding five years in the following statement.

—	1914-15.	1913-14	Average 1908 to 1913.
	R	R	R
Revenue	3,94,356	4,08,120	3,79,154
Expenditure {A. . . .	1,93,707	2,07,364	1,80,485
Expenditure {B. . . .	78,088	65,319	46,661
Total Expenditure . . .	2,71,795	2,72,683	2,27,146
Surplus	1,22,561	1,35,437	1,52,008

The decrease in revenue was principally due to less timber exported during the year.

The increase in expenditure B was principally due to there being an additional provincial officer for part of the year and to the deputation of the Forest Engineer with his staff in connection with the new Sawmill.

The prescribed analysis shows that 98·49 per cent. of receipt came from major produce, and 1·28 per cent. from minor produce, whilst revenue from miscellaneous sources was 0·23 per cent.

Of the expenditure, only 15·63 per cent was incurred on the constitution and improvement of the forests, whilst 55·64 per cent was incurred in connection with the exploitation of the forests, and 28·73 per cent. on the administration and protection of the forests.

The percentage of net income was 31 per cent. against 33 per cent. in the previous year.

The outstandings of revenue at the end of the year amounted to R64,101 against R99,385 at the end of the previous year. (Form No. 26.)

The outstandings due to this department by contractors and disbursers representing advances recoverable amounted to R117-4-5 at the commencement and R76-15-8 at the close of the year or R40-4-9 in favour of the year. (Form No. 27.)

74. The balance of timber in stock in Ghat and Sale Depôts at the close of the year was 122,901 c. ft. against 161,594 c. ft. at the close of the previous year. (Form No. 21.)

185,650 c. ft. of logs which are lying about in the various forests have been written off. There is no point in recording them monthly in Form No. 7, such of them as are of use will be extracted hereafter.

The balance of firewood and charcoal in stock in Ghat and Sale Depôts at the close of the year was 61,788 c. ft. against 64,128 c. ft. at the close of the previous year. (Form No. 21.)

The estimated value of timber in the shape of round logs and scantlings and other produce stored at Sale depôts at the close of the year was R1,32,511 against R1,07,158 at the close of the previous year or R25,353 in favour of the year. (Form No. 22.)

75. The value of live and dead stock at the close of the year amounted to R2,91,015 against R3,18,095 at the close of the previous year or R27,080 against the year. (Form No. 23.)

Two elephants, *viz.*, "Tupong" and "Kawal" died during the year. There are now 41 elephants including two calves.

There were 7 buffaloes on the books at the close of the year.

CHAPTER IV.

ADMINISTRATION.

76. *Inspection.*—Mr. G. S. Hart, C.I.E., Inspector General of Forests, visited the Division in April 1915. During his visit, several important questions of administration were discussed and a short tour in the Middle and North Andaman was made, and the working plan was fully discussed and sent up to press with the necessary alterations embodied in it. He also inspected the Divisional office.

Mr. J. L. Baker, Deputy Conservator of Forests, held charge of the Division up to 1st April 1915, when he was relieved by Mr. J. W. A. Grieve, Deputy Conservator of Forests, who was in charge for the remainder of the year. The former inspected the Divisional office in November 1914.

Mr. M. C. Bonig held charge of the working-plan operations till August 1914, after which date he resumed charge of the Chatham Sub-Division which includes extraction operations. He has worked with great energy as usual, and his long experience of the peculiar conditions of forest work prevailing in these Islands has been of the greatest assistance to the Divisional Forest Officer.

Mr. A. R. Brown, Extra Assistant Conservator of Forests, was in charge of Wimberley Ganj Sub-Division throughout the year. He has largely increased the area under rubber, and his work has generally been most creditable.

Mr. W. H. Miller, Extra Assistant Conservator of Forests, was in charge of Chatham Sub-Division till 1st July 1914 when he went up to the Middle Andaman for marking trees, which work he carried out efficiently. It is to be regretted that he failed to pass his vernacular examination in Burmese.

Mr. C. E. Parkinson, Extra Assistant Conservator of Forests, has been almost entirely employed on botanical work connected with the preparation of an Andamans Forest flora. He has worked very well, and has in addition done some useful survey work and laid out three sample plots.

Mr. C. Alfred, Extra Assistant Conservator of Forests, was promoted to the Provincial Service from January 1st, 1915. He did very good work in the camps up till the end of the year.

Mr. Robertson was on deputation to Dehra Dun, where however he failed to obtain a certificate as Extra Assistant Conservator of Forests.

Mr. Webbe was deputed to the Rangers' course for 1915-17 at Dehra Dun.

77. Babus Ram Lal and Hira Lal, Deputy Rangers, have both done very good work in charge of their respective camps.

One forester was suspended for misconduct and subsequently reinstated. Five foresters were appointed to fill existing vacancies, and three probationary foresters were confirmed in their posts. Great difficulty is found in getting men of sufficiently good educational and other attainments to send to Dehra Dun either to the Provincial or Ranger class.

78. *Office Establishment.*—Difficulty is also experienced in obtaining trained clerks, and it will be, if possible, desirable to make arrangements with the Madras or other forest circle to supply us with one or two trained clerks on deputation on terms sufficiently advantageous to attract good men. The Head Clerk, C. Vijiarangam Moodalier, has worked very hard and often out of regular office hours, while Babu Durga Singh is a very efficient accountant. Three clerks have been absent on sick leave during most of the year.

79. The health of the Establishment has been exceptionally bad : and especially since May, great difficulty has been experienced in carrying on work in the office and the Sawmill in consequence of the number of sick men in hospital.

80. Mr. W. H. Morris was employed as Sawmill Engineer from 16th June 1915. His work has so far been satisfactory.

CHAPTER V.

GENERAL.

81. *Chatham Sawmill.*—The big frame saw was taken down, and its foundations, which had been on timber baulks, were removed and replaced by a cement masonry plinth. This work was most efficiently carried out by Mr. Bonig.

This saw has not been running during the year: and the out-put of the mill consequently fell to 2,522 tons of sawn timber against 2,964 tons last year.

Disposals were as follows:—

	Opening balance 606 tons.	
To Public Works Department	459	tons.
Settlement	241	„
Exported	1,107	„
Exported for sale on commission	80	„
Used Departmentally	325	„
Local auction sale	102	„
Free grants	5	„
Loss in conversion	31	„
Found short	3	„
	2,353	tons.
By stock	3,178	„
Balance on 30th June 1915	825	tons.

1,30,800 shingles, equivalent to 44 tons, remained in stock at the close of the year.

82. The cost of operating the sawmill was as follows:—

	R
Salaries of permanent establishment	2,327
Salaries of temporary establishment	824
Labour	17,550
Stores purchased	5,568
Stores issued from Stock	1,869
Repairs by local Workshops	858
Fuel	672
Total R	29,668

The cost of sawing on the outturn of 2,522 tons was therefore R11-14 per ton. 672 cords of fuel derived from wastage were consumed.

The mill engines were in charge of Mr. W. W. Collins, Engineer and Harbour Master, up to 16th June 1915, when Mr. W. H. Morris took up his appointment as Sawmill Engineer.

83. The purchase of the second hand mill in Java from the Bombay Burma Trading Corporation, Limited, was sanctioned by the Government of India and it is hoped that it will be in working order by April 1916 or shortly afterwards.

84. *Marine.*—The following are the details of cost of running and establishment of the Forest Department steamer and launches during the year.

Name.	Cost of				Time spent in Dock.	Remarks.
	Stores, etc.	Establishment.	Repairs.	Total.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	R	R		R		
Rosamond steamer .	6,571	8,889	(*a*) 6,321	21,781	(*b*) 3rd March to 8th April.	(*a*) Of which R5,183 were spent in Rangoon including navigation charges. (*b*) She had to visit Rangoon twice, owing to no arrangement having been made by the Irrawaddy Flotilla Co., Rangoon, for docking her.
S. L. *Eileen* . .	1,639	1,434	1,849	4,922	1st Februrary onwards.	The *Eileen* is undergoing a complete refit and will be practically a new vessel on completion.
S. C. *May* . .	208	788	628	1,624	...	
S. C. *Dorothy* .	236	325	412	973	...	
S. L. *Surmai* (under construction).	...	...	...	(*c*) 11,906	...	(*c*) Part construction at Kidderpore Dockyard.
Lighters . .	...	...	1,024	1,024	...	
Two new dinghies .	...	...	...	(*d*) 266	...	(*d*) Cost of construction at Chatham.
Total .				42,496		Total cost of running and maintenance.

The thanks of the Department are due to Mr. W. W. Collins, Engineer and Harbour Master, for his promptitude in executing all repairs, and for the efficient manner in which the work has been done.

85. *Labour.*—The labour question remains as usual, the most serious problem with which we have to deal. Moreover, with the heavy increase in works of all sorts that have of recent years been undertaken in the Settlement, its scarcity will be felt to an increasing extent in the future. For instance, although in the rubber plantation, the area under rubber has been raised from 137 acres in 1913 to 335 acres at the end of the current year, the average number of convicts now employed is only 129 against 141 employed in the former year. Further a factory will shortly have to be erected, and tapping and curing operations undertaken—all this means extra labour.

86. To meet the difficulty, an attempt to induce free village labourers to take up forest work on payment is now going to be made. It is hoped that in the near future some scheme for the establishment of forest villages will be found practicable. In the meantime, the cost of a convict to the Department has been raised 25 per cent. since 1st April 1915, and this must be borne in mind in comparing the working expenses of the future with those of the past. The actual total increase in cash expenditure to the Department due to this cause amounted to R3,287 in two months, or about R1,650 a month or in round numbers R20,000 per annum.

87. The question of the rates to be paid for timber and other produce by the Settlement to the Forest Department has been frequently discussed in the past, and is now before the Government of India.

There is no question whatever, that, in cases in which,—owing to the dimensions of the material indented for,—logs which are capable of yielding squares have to be cut up, the rates are far too low. The present market price of a padouk square is over R90 a ton: while the Settlement pays about R85 to 90 per ton for the *cut scantlings* extracted from it. In other words the wastage say at least 30 per cent. and the cost of sawing are a dead loss to the Forest Department: and they represent about R50 per ton.

The actual cost of extraction of timber to Chatham per ton works out at R20-13 per ton; as per detail given:—

Heading of expenditure.		Expenditure.
		R
Exploitation	A. I. a.	1,09,398
Feed and keep of cattle . . .	A. VI. b.	18,186
¾ of stores purchased	A. VI. c.	1,223
¾ of buildings	A. VII. b.	3,142
¾ of establishment	B. I. and B.II.	57,574
Interest at 3½ per cent on total value of elephants on 30th June 1915 (as per Form No. 23) . . .		1,417
Total Expenditure .		1,90,940
Timber extracted in tons (brought to Port Blair)		9,161
Cost rate per ton .		20-13

88. Again the fuel extracted for the Settlement from Wimberley Gunj is worked at a loss of approximately R2-6 per cord. I append detailed figures which shew that the actual cost of fuel extracted from Wimberley

Gunj amounts to R6-6 per cord, while the Settlement pays R4 only per cord.

		R	
Exploitation	A. I. b.	10,475	Excluding R2,648 for charcoal.
¼ of stores purchased . . .	A. VI. c.	408	
¼ of buildings	A. VII. b.	1,047	
⅛ of establishment	B. I. & B. II.	9,595	
Roads and bridges	A. VII. a.	869	
Depreciation 5 per cent. on Locomotives valued R8,136 on 30th June 1915.		406	
Depreciation 3 per cent. on tramlines valued R69,138 on 30th June 1915.		2,074	
Interest 3 per cent. on Locomotives valued R7,730 on 30th June 1915.		232	
Interest 3 per cent. on tramlines valued R67,064 on 30th June 1915.		2,012	
		27,118	
Number of fuel cords extracted	Cords	4,216	Excluding 1,880 cords of Sawmill firewood.
	Cost rate per cord R6-7		

Moreover, the above figures include the cost of convicts for 10 months at R0-4-0 only. With the new rate of R0-5-0 per convict throughout the year, the cost will work out at approximately R7 per cord. The above figures do not include 1,880 cords of fuel derived from the Sawmill as it is difficult to calculate the cost of this. If however a reasonable charge for extraction and sawing, etc., is allowed for it is no cheaper than the fuel supplied from Wimberley Gunj.

J. W. A. GRIEVE,
Deputy Conservator of Forests,
Andamans.

PORT BLAIR;
The 20th September 1915.

ANNUAL FORM No. 7.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraphs 1 and 2.)

Area of Reserved Forests, Protected Forests, Unclassed or Public Forest Land, and Leased Forests, 1914-15.

Division. (1)	Range. (2)	Civil District or Territory. (3)	Name of Forest. (4)	Area on 1st July 1914. Acres. (5)	Area on 1st July 1914. Equivalent in square miles. (6)	Added during the year. Acres. (7)	Excluded or transferred to other heads. Acres. (8)	Area on 30th June 1915. Acres. (9)	Area on 30th June 1915. Equivalent in square miles. (10)	No. and date of Notification of addition or transfer, etc. (11)	Remarks. (12)
			*"Reserved" Forests.								*The so-called reserved forests are under the same legal status as unclassed forests. Their regulation is provided for in section 10. Andaman and Nicobar Manual.
		South Andaman Island. Total area of mainland 474 square miles.	1. Mount Harriett	25,600	40·00	...	...	25,600	40·00	Chief Commissioner's Notification No. 9, dated 1st February 1915.	
			2. Hope Town	415	0·65	...	...	415	0·65		
			3. Goplakabang	2,085	3·26	...	120	1,965	3·07		
			4. Prigade creek	2,344	3·66	...	...	2,344	3·66		
			5. Namunaghar	1,275	1·99	...	...	1,275	1·99		
			6. Dhani Khari	8,031	12·55	...	...	8,031	12·55		
			7. Ali Musjid	14,916	23·30	...	...	14,916	23·30		
				54,666	85·41	...	120	54,546	85·22		
Andamans			*Unclassed Forests.*								(*a*) Transferred from "Reserved" Forests.
		Andaman Islands	1. South Andaman	2,20,164	344·01	120 (*a*)	585 (*b*)	2,19,459	342·91		(*b*) Transferred to the settlement.
			2. Middle "	3,65,311	570·80	...	...	3,65,311	570·80		
			3. North "	3,17,184	495·60	...	...	3,17,184	495·60		
			4. Baratang group	78,234	122·24	...	...	78,234	122·24		
			5. Ritchies Archipelago	63,874	99·80	...	...	63,874	99·80		
			6. Rutland	30,925	48·32	...	...	30,925	48·32		
			7. The Laybrinth Islands	6,886	10·76	...	...	6,886	10·76		
			8. North Sentinel	14,822	23·16	...	...	14,822	23·16		
			9. South "	358	0·56	...	...	358	0·56		
			10. Little Andaman	1,90,771	298·08	...	...	1,90,771	298·08		
			11. Other Islands	70,510	110·17	...	...	70,510	110·17		
				13,59,039	2,123·50	120	585	13,58,334	2,122·40		
			GRAND TOTAL	...	2,208·91	...	...	...	2,207·62		

FORM No. 8.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraphs 3 and 4.)

Statement showing the Progress made in and the Expenditure incurred on Forest Settlements during 1914-15.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year. Sq. Ms.	AREAS FINALLY SETTLED DURING THE YEAR.						AREAS UNDERGOING SETTLEMENT.						Remarks.
			Number and date of Government order according final sanction to the Settlement.	Name of Forest settled.	Area in square miles.	Expenditure incurred during the year on areas finally settled.		Entire cost per square mile of area finally settled during the year.	At commencement of the year.		Taken in hand during the year.		Expenditure incurred during the year on areas undergoing settlement.		
						In forest accounts.	In other accounts.		Name of tract.	Area, in square miles.	Name of tract.	Area, in square miles.	In Forest accounts.	In other accounts.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						Rs.	Rs.	Rs.					Rs.	Rs.	
Andamans	South Andaman Settlement.	85	...	...	...	...		...	...	...	...	...	...	...	120 acres transferred to Settlement.

FORM No. 9.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraph 5.)

Record of Demarcation and Maintenance of Boundaries, 1914-15.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at close of the year.	Length of boundaries still to be demarcated at close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	EXPENDITURE ON DEMARCATION DURING THE YEAR.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans	...	12	38	50	...	86	136	...	62	

N. B.—Boundaries include besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub-divisions, such as compartments and coupes.

Form No. 10.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraphs 6 to 9.)

Statement of Forest areas surveyed and under survey during the year 1914-15.

Division.	AREA SURVEYED AND UNDER SURVEY DURING THE YEAR 1914-15.																				Areas remaining to be taken under Survey.	Total Forest area at end of the year as per Form No. 7.	COST.			Remarks.
	Special surveys—Maps on 2-inch scale or over, by Survey of India Department.						Ordinary, included in topographical programme of the Survey of India or in District Surveys.						Chain and compass or other surveys by local officers.													
	With interior details.			*Boundary surveys.*			*With interior details.*			*Boundary surveys.*			*With interior details.*				*Boundary surveys.*								
													4-inch or over.		Under 4-inch.											
	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.			Previous.	Of year.	Entire cost of all Surveys at end of the year.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Sq. Ms	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Rs.	Rs.	
Andamans .	(a) 302	(b) 225	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(c) 496	2,209	33,501	25,553	59,054	(a) In the Middle Andaman. (b) 145 square miles in middle Andaman and 80 square miles in Baratang group. (c) Forest surveys on 2 inches scale now required for North Andaman 496 square miles.

Form No. 11.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraphs 10 to 12)

Progress made in Working-Plans, 1914-15.

Division.	Areas for which Working-Plans have been sanctioned by Local Government.		Areas for which Working-Plans are being compiled.		Areas for which Working-Plans have still to be taken in hand.	Areas for which Working-Plans are not at present required.	Total Forest area, as in Form No. 7.	Entire cost per square mile of Working-Plans completed.	Remarks.
	At commencement of year.	During year.	At commencement of year.	Taking in hand during year.					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Sq. ms.	Rs.	
			Reserved Forests.						
Andamans	...	...	...	...	85	...	85	...	
			Unclassed State Forests.						
	708	...	...	...	...	1,414	2,122	72 6 0	North Andaman Working-Plan revised and incorporated in General Working-Plan. Total area 708 square miles completed.

Form No. 12.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraphs 13 to 20.)

Communications and Buildings, 1914-15.

Division.	New work undertaken during the year.							Repairs executed during the year.							Remarks.
	Buildings		Roads and Paths.			Other works.	Total expended on new work.	Buildings.		Roads and Paths.			Other works.	Total expended on repairs.	
	Description of Buildings.	Expenditure incurred.	Description of Road or Path.	Length of Road or Path.	Expenditure incurred.	Expenditure incurred.		Description of Buildings.	Expenditure incurred.	Description of Road or Path.	Length repaired.	Expenditure incurred.	Expenditure incurred.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Rs.		Miles.	Rs.	Rs.	Rs.		Rs.		Miles.	Rs.	Rs.	Rs.	
Andamans—	Deputy Ranger's quarters at Garacherma.	7						Ranger's quarters at Haddo.	51						Expenditure on road alignment has been charged under A. I. A.
	Rest house at Bom-lung-ta.	51						Extra Deputy Conservator of Forests' quarters at Chatham.	25						
	Assistant Forest Officer's quarters at Wimberlygunj.	2,420						Deputy Conservator of Forests' quarters at Chatham.	1,482						
	Clerk's quarters at Wimberlygunj.	78						Forest Office at Chatham.	74						
								Convict barrack at Wimberlygunj.	1	Steam tramline .	6	869			
		2,556		...	...	...	2,556		1,633		...	869	...	2,502	

Form No. 13.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraph 23.)

Register of breaches of Forest Rules during 1914-15.

Forest Division.	Cases pending from previous year.	New Cases of the Year.					Total cases.	Disposed of during the year.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Conviction.		Acquittals.		Total.		
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andamans . . . A	...	...	7	...	...	7	7	6	(a) 14	1	2	7	16	(a) Three accused acquitted. The Indian Forest Act not in force in the Andamans.
Grand Total A	...	...	7	...	...	7	7	6	14	1	2	7	16	

N. B.—A means cases taken into court.

FORM No. 16.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraph 25.)

Area closed and open to Grazing during 1914-15.

Division.	AREA, IN SQUARE MILES.						Remarks.
	Closed to all animals.		Closed only to browsers (camels, goats or sheep).		Open to all animals.	Total area.	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.		
1	2	3	4	5	6	7	8
			Reserved Forests.				
	85	...	...	...	...	85	
			Unclassed Forests.				
Andamans	...	...	...	...	343(*a*)	...	(*a*) Area of unclassed forests in the South Andamans Settlement. No grazing or fodder grasses available.

N. B.—Entries in columns 4 and 5 should not include areas already entered in columns 2 and 3. Column 7 should be the total of columns 2, 3, 4, 5 and 6.

IN THE ANDAMANS FOR THE YEAR 1914-15.

FORM No. 18.

FOREST DEPARTMENT, INDIA, ANDAMANS.

(Paragraphs 30 to 47)

Artificial reproduction for the forest year 1914-15.

Division.	Kind of plantation.	Area in acres. On 1st July 1914.	Added during the year.	Excluded during the year.	Area on 30th June 1915.	Expenditure during the year. Creation.	Up-keep.	Total expenditure from commencement. Creation	Up-keep	Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Regular.					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Andamans.	Padauk (Goplakabang) 1883	4	...	...	4	...	...	Not known.		...	...	
	„ „ 1884	5	...	...	5	...	...	Do.		...	...	
	„ „ 1885	16	...	6(*a*)	10	...	...	Do.		...	...	(*a*) Area excluded and cleared for rubber planting.
	„ „ 1886	20	...	...	20	...	...	Do.		...	...	
	Teak and Padauk (Goplakabang) 1887.	16	...	...	16	...	...	558	Not known.	...	...	
	„ „ 1889.	22	...	...	22	...	...	1,177	„	...	...	
	„ „ 1890.	45	...	...	45	...	...	1,096	„	...	...	
	„ (Ali musjid) 1892	...	320(*b*)	...	320	...	50	3,003	„	...	...	(*b*) These plantations were written off previously but have now been cleared and included.
	„ „ 1893	...	550 *b*)	...	550	...	100	2,745	„	...	...	
	„ „ 1894	...	400(*b*)	...	400	...	57	1,524	„	...	...	
	Mangrove (Namunaghar) 1897	442	...	...	442	...	...	1,906	916	...	...	
	„ (Dhani Khari) 1899	243	...	...	243	...	...	1,975	475	...	...	
	Para rubber (Namunaghar) 1881	$\frac{1}{10}$	$\frac{1}{10}$(*c*)	...	$\frac{1}{5}$	...	3	18	108	...	...	(*c*) Recomputation.
	„ (Goplakabang) 1906 to 1914.	191½	143½	...	335	10,066	3,536	23,472	13,274	239	239(*d*)	(*d*) Sale of 160 lbs. rubber.
	Afzalia and mahogany 1907	8	...	...	8	...	...	79	197	...	...	
	Eucalyptus 1913	5½	...	...	5½		...	302	...	...	...	
	Total regular plantation	1,018$\frac{1}{10}$	1,413$\frac{17}{20}$	6	2,426$\frac{3}{5}$	10,066	3,796	...	...	239	239	
	Cultural operations.											
	Padauk area 1903 to 1911	1,300	...	22(*e*)	1,278	...	454	17,918	15,001	...	...	(*e*) Excluded and cleared for rubber planting.
	Clear-felled broadcast (Goplakabang) sowing, 1912.	100	...	80(*f*)	20	...	...	138	381	...	...	(*f*) Recomputation.
	Rutland, partial clearing with sowing.	35	...	...	35	...	...	167	48	...	...	
	Teak and Padauk (Goplakabang) 1913.	33½	...	...	33½	...	194	559	572	...	...	
	„ with exotics „ 1913	52	...	...	52	...	19	460	316	...	...	
	Teak and Padauk 1914	80	...	...	80	...	635	1,365	635	...	...	
	Albizzia moluccanna 1914	30	...	30(*g*)	...	...	...	36	...	...	...	(*g*) Excluded and cleared for rubber planting.
	„ „ 1915	...	32	...	32	37	7	37	7	...	...	
	„ „ and Eucalyptus 1914	15	...	...	15	137	20	154	20	...	...	
	„ „ „ 1915	...	38	...	38	402	6	402	6	...	...	
	Cultural operations, Long Island.	10	...	...	10	...	...	174	...	...	...	
	Cultural operations, Bejalanta	5	...	...	5	...	...	22	...	...	...	
	Collection of seeds, various	...	...	..	...	...	107	...	...	...	...	
	Freight on rubber biscuits	...	...	...	...	...	17(*h*)	...	...	...	...	(*h*) Wrongly charged under A-VIII-E.
	Total cultural operations	1,660½	70	132	1,598½	576	1,459	...	...	...	...	
						15,897						

NOTE.—Up-keep includes cleanings, weedings, thinnings, filling up blanks, etc. Cultural operations are defined in the memorandu n appended to Circular No. 10-F., dated the 5th August 1904.

FORM

FOREST

Outturn (in cubic feet, solid) of Timber and Fuel

Division.	Timber in the rough; Logs.					Timber in the rough; Poles.					Sawn or square Timber.				
	Government.	Purchasers.	Free Grantees.	District Officers	Total.	Government.	Purchasers	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
I.—Reserved Forests.															
Andamans.	29,720	...	...	...	29,720	59,900	37	(a) 14,400	...	74,337	1,404	...	...	...	1,404
II.—Protected Forests.			*Nil.*					*Nil.*					*Nil.*		
III.—Unclassed State Forests.															
	2,80,037	3,444	...	...	2,83,517	2,680	41	(a) 14,400	25,309	42,430	(c) 1,91,686	24,823	...	...	2,16,509
IV.—Leased Forests.															
			Nil.					*Nil.*					*Nil.*		
Grand Total .	3,09,793	3,444	...	...	3,13,237	62,580	78	28,800	25,309	1,16,767	1,93,090	24,823	...	..	2,17,913

Charcoal should be shown by its equivalent in fuel, the quantity
In the "Remarks" column of this form it should be shown which of the figures entered in it are

No. 19.

(Paragraphs 55 to 65.)

DEPARTMENT, INDIA, ANDAMANS.

during the year 1914-15 and Agency of Exploitation.

Miscellaneous.					Total Timber.					Fuel.					Total Outturn.	Remarks.
Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.		
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
...	...	...	...	...	91,024	37	(a) 14,400	...	1,05,461	(d) 3,86,419	40	(b) 1,15,200	25,120	5,26,779	6,32,240	(a) An estimate based on number of free grantees, huts. 10 bullies = 5 c. ft. 2 posts = 10 c. ft. are allowed for each house.
		Nil					*Nil*					*Nil*				(b) There are 1,920 house holders and quantity of fuel removed per house is estimated at 1½ cord. 1 cord = 80 c. ft. solid.
	836	...	...	836	4,74,439	29,144	(a) 14,400	25,309	5,43,292	(d) 3,15,808	13,320	(b) 1,15,200	1,35,840	5,80,168	11,23,460	(c) Logs squared with axe. (d) Including charcoal. 1 maund = 8 c. ft. solid.
		Nil					*Nil*					*Nil*				Fuel 1 cord = 88 c. ft. solid.
...	836	...	...	836	5,65,463	29,181	28,800	25,309	6,48,753	7,02,227	13,360	2,30,400	1,60,960	11,06,947	17,55,700	

of wood consumed in producing it being entered in cubic feet solid.

ctuals and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

FORM No. 20.

FOREST DEPARTMENT, INDIA ANDAMANS.

(Paragraphs 55 to 65)

Outturn of Minor Forest Produce during the year 1914-15.

Description of produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
	By Government Agency.		By Purchasers.		By Free grants.		By District Officers.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Rs.		Rs.		Rs.		Rs.		Rs.	
I.—Reserved Forests.											
Bamboos . . No.	135,554	85	37,850	24	1,92,000	120	...	...	365,404	229	The columns 6 and 7 are estimated based upon the following data.
Canes . . ,,	24,765	15	7,750	5	38,400	24	...	...	70,915	44	1,920 self-suppporters' and free resident houses each of which is allowed.
Thatching leaves . Bdles.	...	...	1,584	99	19,200	1,200	...	...	20,784	1,299	200 Bamboos. 40 Canes.
Bark . . . lbs.	44,230	138	...	...	...	...	...	...	44,230	138	20 Bundles thatching leaves annually.
Pan leaves . . Cooly load.	...	...	7	...	...	...	..	...	..	...	All other figures are actual.
Total .	...	238	...	128	..	1,344	...	...	...	1,710	
II.—Protected Forests.											
			-	*Nil*							
III.—Unclassed State Forests.											
Bamboos . . No.	12,680	8	42,450	26	192,000	120	2,02,291	126	449,421	280	
Canes . . ,,	204,782	128	4,350	3	38,400	24	21,616	14	269,148	169	
Thatching leaves . Bdles.	354	22	2,756	172	19,200	1,200	3,821	239	26,131	1,633	
Bark . . . lbs.	...	...	...	...	...	...	...	...	...	...	
Pan leaves . . Cooly load.	...	...	38	3	...	...	...	...	38	3	
Total .	...	158	...	204	...	1,344	...	379	...	2,085	
IV.—Leased Forests.											
					Nil.						
Grand Total .	...	396	...	332	...	2,688	...	379	...	3,795	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

FORM No. 21.

(Paragraph 74.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally, or otherwise disposed of during the year 1914-15.

Name of Division.	Balance at commencement of the year in Ghat and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in Ghat and sale depôts.
1	2	3	4	5	6
		TIMBER	(cubic feet.)		
		Padauk.			
	90,523	246,852	337,375	290,103	47,272
		Koko.			
	2,303	9,961	12,264	7,830	4,434
		B. Chuglam.			
	3,281	2,192	5,473	5,220	253
		Marblewood.			
	259	...	259	259	...
		Pyinma.			
	8,437	86,534	94,971	67,514	27,457
		Gurjan.			
	35,743	95,373	131,116	104,751	26,365
		Other logs.			
	20,728	70,938	91,666	75,126	16,540
		Poles and Bullies.			
Andamans . . .	320	62,580	62,900	62,300	580
TOTAL TIMBER .	161,594	574,430	736,024	613,103	122,901
		FUEL	(cubic feet solid.)		
		Firewood.			
	58,300	650,782	709,082	647,328	61,754
		Charcoal.			
	5,828	51,445	57,273	57,239	34
TOTAL .	64,128	702,227	766,355	704,567	61,788
		MINOR PRODUCE			
	Rs.	Rs.	Rs.	Rs.	Rs.
	425	7,766	8,191	7,733	458

FORM No. 22.

(Paragraph 74.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Abstract showing the Value of Timber and other Produce at sale Depôts for the year 1914-15.

Description of Timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.		Remarks.
	No.	C. ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
			Rs.			Rs.	Rs.	Rs.	
TIMBER.									
Logs	3,113	83,395	57,343	1,409	65,589	66,022	8,679	...	
Scantlings	...	36,169	46,710	75,498	47,458	63,703	16,993	...	
Total .	3,113	119,564	1,04,053	76,907	113,047	1,29,725	25,672	...	
FUEL.									
Firewood c. ft. solid . .	...	58,300	2,660	...	61,226	2,783	123	...	1 Cord = 88 c. ft. solid.
Charcoal „ „ . .	..	5,828	455	...	34	3	...	452	1 md. = 8 c. ft. solid.
Total .	...	64,128	3,105	..	61,260	2,786	123	452	
Grand Total .	...	...	1,07,158	...	...	1,32,511	25,805	452	

Net difference in favour of the year Rs. 25,353.

FORM No. 23.

(Paragraph 75.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Abstract showing the Value of Live and Dead Stock for the year 1914-15.

Description of Live and Dead Stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in Value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
		Rs.		Rs.	Rs.	Rs.	
Live Stock.							
Elephants	41	49,390	39	40,070	...	9,320	Depreciation 10 per cent. Two elephants died valued Rs. 4,868.
„ calves	2	375	2	416	41	...	Addition 10 per cent.
Buffaloes	7	326	7	294	...	32	Depreciation 10 per cent.
Total	50	50,091	48	40,780	41	9,352	
Dead Stock.							
Steam Vessels.							
Steam vessel 'Rosamond'	1	1,23,684	1	1,18,000	...	5,684	Depreciation 5 per cent. Cost of spare armature added
„ launch 'Eileen'	1	6,722	1	6,386	...	336	„ 5 „
„ cutter 'May'	1	3,848	1	3,656	...	192	„ 5 „
„ „ "Dorothy"	1	2,241	1	2,129	...	112	„ 5 „
Oil motor "Ruby"	1	266	1	253	...	13	„ 5 „
Boats and lighters.							
Lighters	2	1,241	2	1,179	...	62	Depreciation 5 per cent.
Boats, timber towing	18	7,798	18	8,095	297	...	„ 5 „ One received by conversion from house boat and one condemned.
„ house	2	1,755	1	835	...	920	„ 5 „ One house boat converted into timber boat.
„ officers, rowing	2	437	2	415	...	22	„ 5 „
„ jolly	4	783	4	744	...	39	„ 5 „
„ rowing, 10 oars	1	304	1	289	...	15	„ 5 „
„ life	1	1,248	1	1,186	...	62	„ 5 „
„ water	1	706	1	671	...	35	„ 5 „
Dingies, Bengal	6	373	8	554	181	...	„ 5 „ Two constructed.
„ „ Burmese	1	30	2	96	66	...	„ 5 „ One „
Plant and machinery.							
Sawmill	...	16,168	...	14,551	...	1,617	Depreciation 10 per cent.
Crane	1	139	1	132	...	7	„ 5 „
Portable tramway	25½m 1 Loco. 77trucks 4 trollies	60,489	25½m 1 Loco. 73 trucks 5 trollies	54,440	... ...	6,049	„ 10 „
Carts, small	5	103	3	93	...	10	Depreciation 10 per cent. Two written off of no value.
Buildings (wooden)	...	9,371	...	8,434	...	937	„ 10 „
Mathematical instruments	...	7,951	...	7,738	...	213	„ 5 „
Furniture	...	708	...	638	...	70	„ 10 „
Stores (marine and miscellaneous)	...	21,639	...	19,721	...	1,918	„ 10 „ Difference in valuation at commencement and end.
Total	...	2,68,004	...	2,50,235	544	18,313	For Rs. 585 Against Rs. 27,635
GRAND TOTAL	...	3,18,095	...	2,91,015	585	27,665	Against Rs. 27,080

FORM No. 24.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Revenue of the Andamans Division during 1914-15. (Paragraph 73.)

Budget Heads.	Direction.	Division.	Division.	Division.	Division.	Division.	Division.	Division.	Total.
1	2	3	4	5	6	7	8	9	10
REVENUE.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—Timber and other produce removed from the forests by Government Agency—									
(a) Timber	...	...	...	...	...	...	...	...	3,63,948 0 0
(b) Firewood and charcoal	...	...	...	...	...	...	...	...	21,272 0 0
(c) Bamboos	...	...	...	...	...	...	...	...	385 0 0
(d) Sandal-wood	...	...	...	...	...	...	...	...	...
(e) Grass and other minor produce	...	...	...	...	...	...	...	...	4,372 0 0
Total I	...	...	...	...	...	...	...	...	3,89,977 0 0
II.—Timber and other produce removed from the forests by consumers or purchasers—									
(a) Timber	...	...	...	...	...	...	...	...	3,067 0 0
(b) Firewood and charcoal	...	...	...	...	...	...	...	...	96 0 0
(c) Bamboos	...	...	...	...	...	...	...	...	43 0 0
(d) Grazing and Fodder grass	...	...	...	...	...	...	...	...	...
(e) Other minor produce	...	...	...	...	...	...	...	...	282 0 0
(f) Other items	...	...	...	...	...	...	...	...	...
(g) Commutation fees	...	...	...	...	...	...	...	...	...
Total II	...	...	...	...	...	...	...	...	3,488 0 0
III.—Drift and waif wood and confiscated forest produce.	...	...	...	...	...	...	...	...	...
Total III	...	...	...	...	...	...	...	...	...
IV.—Revenue from forests not managed by Government—									
(a) Duty on foreign timber and other forest produce	...	...	...	...	...	...	...	...	...
(b) Revenue from shared and private forests	...	...	...	...	...	...	...	...	...
Total IV	...	...	...	...	...	...	...	...	...
V.—Miscellaneous—									
(a) Fines and forfeitures	...	...	...	...	...	...	...	...	...
(b) Refunds	...	...	...	...	...	...	...	...	69 0 0
(c) Other sources	...	...	...	...	...	...	...	...	822 0 0
Total V	...	...	...	...	...	...	...	...	891 0 0
Grand Total Revenue	...	...	...	...	...	...	...	...	3,94,356 0 0

[Paragraph 73.]

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Expenditure of the Andamans Division during 1914-1915.

Budget Heads.	Direction.	Division.	Division.	Division.	Division.	Division.	Division.	Division.	Total.
1	2	3	4	5	6	7	8	9	10
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
EXPENDITURE.									
A.—Conservancy and Works.									
I.—Timber and other produce removed from the forests by Government Agency—									
(*a*) Timber	...	...	...	...	...	...	...	...	1,09,398 0 0
(*b*) Firewood and charcoal	...	...	...	...	...	...	...	...	13,123 11 0
(*c*) Bamboos	...	...	...	...	...	...	...	...	70 0 0
(*d*) Sandal-wood	...	...	...	...	...	...	...	...	...
(*e*) Grass and other minor produce	...	...	...	...	...	...	...	...	1,434 0 0
Total A. I	...	...	...	...	...	...	...	...	1,24,025 0 0
II.—Timber and other produce removed form the forest by consumers or purchasers	...	...	...	...	...	...	...	...	118 0 0
Total A. II	...	...	...	...	...	...	...	...	118 0 0
III.—Drift and waif wood and confiscated forest produce	...	...	...	...	...	...	...	...	...
Total A. III	...	...	...	...	...	...	...	...	...
IV.—Revenue from Forests not managed by Government—									
(*a*) Duty on foreign timber and other forest produce	...	...	...	...	...	...	...	...	...
(*b*) Revenue from shared and private forests	...	...	...	...	...	...	...	...	...
Total A. IV	...	...	...	...	...	...	...	...	...

FORM No. 24—(*concluded*).

(Paragraph 73.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Expenditure of the Andamans Division during 1914-1915—contd.

Budget Heads.	Direction.	Division.	Division.	Division.	Division.	Division.	Division.	Division.	Total.
1	2	3	4	5	6	7	8	9	10
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
V.—Rent of leased forests and payments to share-holders in forests managed by Government	...	...	...	...	...	...	...	...	...
Total A. V	...	...	...	...	...	...	...	...	...
VI.—Live-stock, Stores, Tools and Plant—									
(*a*) Purchase of cattle	...	...	...	...	...	...	—	...	...
(*b*) Feed and keep of cattle	...	...	...	...	...	...	...	...	18,186 0 0
(*c*) Purchase of stores, tools and plant	...	...		...	...	...	...	...	1,631 0 0
Total A. VI	...	...	...	...	...	...	...	...	19,817 0 0
VII.—Communications and Buildings—									
(*a*) Roads and bridges	...	...	...	...	...	...	...	...	869 0 0
(*b*) Buildings	...	...	...	...	...	...	...	...	4,189 0 0
(*c*) Other works	...	...	...	...	...	...	...	...	...
Total A. VII	...	...	...	...	...	...	...	...	5,058 0 0
VIII.—Organization, improvement and extension of Forests—									
(*a*) Demarcation	...	...	...	...	...	...	...	...	62 0 0
(*b*) Cost of Forest Settlements; compensation for land and rights	...	...	...	...	...	...	...	...	...
(*c*) Surveys	...	...	...	...	...	...	...	...	25,553 0 0
(*d*) Working-plans	...	...	...	...	...	...	...	...	300 0 0
(*e*) Sowing and planting	...	...	...	...	...	...	...	...	15,897 0 0
(*f*) Protection from fire	...	...	...	...	...	...	...	...	...
(*g*) Other works	...	...	...	...	...	...	...	...	658 0 0
Total A. VIII	...	...	...	...	...	...	...	...	42,470 0 0

IX.—Miscellaneous—									
(*a*) Law charges	...	...	...	...	...	...	...	...	...
(*b*) Other charges	...	...	...	...	...	...	...	...	2,219 0 0
Total A. IX	...	...	...	...	...	...	...	...	2,219 0 0
Carried over—Total A.—Conservancy and Works	...	...	...	...	...	...	...	...	1,93,707 0 0
Brought forward, Total A.—Conservancy and Works	...	...	...	...	...	...	...	...	1,93,707 0 0
B.—ESTABLISHMENTS.									
I.—Salaries—									
(*a*) Conservators	...	...	...	...	...	...	...	...	...
(*b*) Superior officers	...	...	...	...	...	...	...	...	39,432 0 0
(*c*) Subordinate forest and depot establishments	...	...	...	...	...	...	...	...	13,456 0 0
(*d*) Office establishments	...	...	...	...	...	...	...	...	7,916 0 0
(*e*) Deputation and special allowances	...	...	...	...	...	...	...	...	8,138 0 0
(*f*) Exchange compensation allowance	...	...	...	...	...	...	...	...	...
Total B. I	...	...	...	...	...	...	...	...	68,942 0 0
II.—Travelling Allowances—									
(*a*) Conservators	...	...	...	...	...	...	...	...	...
(*b*) Superior officers	...	...	...	...	...	...	...	...	6,115 0 0
(*c*) Subordinate forest and depot establishments	...	...	...	...	...	...	...	...	1,025 0 0
(*d*) Office establishments	...	...	...	...	...	...	...	...	683 0 0
Total B. II	...	...	...	...	...	...	...	...	7,823 0 0
III.—Contingencies—									
(*a*) Stationery	...	...	...	...	...	...	...	...	31 0 0
(*b*) Carriage of tents and records	...	...	...	...	...	...	...	...	44 0 0
(*c*) Rents, rates and taxes	...	...	...	...	...	...	...	...	...
(*d*) Pay of police guards	...	...	...	...	...	...	...	...	...
(*e*) Official postage	...	...	...	...	...	...	...	...	408 0 0
(*f*) Sundries	...	...	...	...	...	...	...	...	840 0 0
Total B. III	...	...	...	...	...	...	...	...	1,323 0 0
Total B.—Establishments	...	...	...	...	...	...	...	...	78,088 0 0
GRAND TOTAL OF EXPENDITURE	...	...	...	...	...	...	...	...	2,71,795 0 0
Surplus+	...	...	...	...	...	...	...	...	1,22,561 0 0

FORM No. 25.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Account Current for the forest year 1914-15.

Receipts.

	Rs. A. P.	Rs. A. P.
TO CASH BALANCE	...	...
VIII.—Assessed Taxes—		
Income tax deduction from salaries	...	1,199 8 5
„ REVENUE AS PER ANNUAL SUMMARY, FORM No. 24	...	3,94,356 6 9
„ SERVICE FUNDS	...	...
Bengal and Madras Service Family Pension Fund	...	403 7 0
„ DEPOSITS	...	...
General Provident Fund	...	7,639 3 0
Special Account—		
General Family Pension Fund	...	401 0 0
„ FOREST CASH REMITTANCES, LOCAL—		
Forest cheques drawn	...	94,044 2 4
Inter-divisional transfers	...	1,369 1 1
„ FOREST ADVANCES	...	34,011 14 7
„ SUSPENSE	...	20 0 0
„ ACCOUNT CURRENT (OTHER GOVERNMENTS)	...	...
„ INTER-DEPARTMENTAL TRANSFERS	...	...
Accounts between India and Burma—		
III.—Items Adjustable in India	...	6,376 7 8
Accounts between India and Bengal—		
III.—Items Adjustable by India	...	726 15 4
IV.— „ „ „ Bengal	...	45 0 0
To Inter-Departmental Transfers—		
Military Supply Department	...	266 0 7
Telegraph Department	...	130 0 0
Post Office „	...	588 12 5
Marine „	...	14,960 4 10
Civil „	...	1,46,563 7 11
Total	...	7,03,101 11 11

Payments

	Rs. A. P.	Rs. A. P.
I.—REFUNDS AND DRAWBACKS	...	...
BY EXPENDITURE AS PER ANNUAL SUMMARY, FORM No. 24	...	2,71,795 2 9
„ DEPOSITS	...	...
General Provident Fund	...	2,970 0 0
„ FOREST CASH REMITTANCES, LOCAL—		
Remittances to treasuries	...	2,58,145 13 5
Inter-divisional transfers	...	50 0 0
„ FOREST ADVANCES	...	33,971 9 10
„ SUSPENSE	...	...
„ ACCOUNT CURRENT (OTHER GOVERNMENTS)	...	...
„ INTER-DEPARTMENTAL TRANSFERS	...	...
„ CASH BALANCE	...	...
Accounts between India and Burma—		
III.—Items Adjustable by India	...	10,145 12 5
Accounts between India and Bengal—		
III.—Items Adjustable by India	...	18 4 9
IV.— „ „ „ Bengal	...	62,448 12 9
Accounts between India and Madras—		
IV.—Items Adjustable by Madras	...	9 5 4
Accounts between India and Bombay—		
III.—Items Adjustable by India	...	17,035 1 9
IV.— „ „ „ Bombay	...	487 7 0
Inter-Departmental Transfers—		
Marine Department	...	6,768 14 8
Civil Departments	...	39,255 7 3
Total	...	7,03,101 11 11

ANNUAL FORM No. 26.

[Paragraph 73.]

FOREST DEPARTMENT, INDIA, ANDAMANS.

Revenue received and Outstandings on account of Revenue during 1914-15.

Division.	Particulars.	Outstanding at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the Department at end of year.	Remarks.
1	2	3	4	5	6	7	8
Andamans . . .	Revenue from timber and other produce removed by Government Agency.	Rs. A. P. 99,385 2 1	Rs A. P. 3,54,693 9 5	Rs. A. P. 4,54,078 11 6	Rs. A. P. 3,89,977 10 0	Rs. A. P. 64,101 1 6	Approved firms pay at 90 days' sight shipping documents.
	Other revenue	...	4,378 12 9	4,378 12 9	4,378 12 9	...	
	Total .	99,385 2 1	3,59,072 6 2	4,58,457 8 3	3,94,356 6 9	64,101 1 6	

ANNUAL FORM No. 27.

[Paragraph 73.]

FOREST DEPARTMENT, INDIA, ANDAMANS.

Outstandings and Liabilities on account of Contractors and Disbursers for 1914-15.

Division.	Department Debtor.			Department Creditor.			Balance Due.		Remarks.
	Opening balance.	Recoveries in cash and value of supplies and work done during the year.	Total.	Opening balance.	Payments made during year.	Total.	To Department (Outstandings.)	By Department (Liabilities.)	
	2	3	4	5	6	7	8	9	10
	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Andamans	...	34,011 14 7	34,011 14 7	117 4 5	33,971 9 10	34,088 14 3	76 15 8	...	
Total .	...	34,011 14 7	34,011 14 7	117 4 5	33,971 9 10	34,088 14 3	76 15 8	...	

APPENDIX I.

Descriptive roll of Elephants in the Andamans Forest Division on the 30th June 1915.

Serial No.	Name of Elephants.	Sex.	Height. Feet.	Height. Inches.	Date of receipt.	Estimated age on 31st March 1892 or on date of receipt if arrived later.	Present age.	Number of years elephant has been working.	Condition.	Number of days: At work.	Number of days: At rest	Number of days: Sick.	Cost price.	Remarks.
1	2	3	4		5	6	7	8	9		10		11	12
								Y. M.					R	
	Arnold . . (Tusker)	Male .	8	8	Before July 1891 .	*41	64	24 0	Fair	311	53	1	...	
2	Goolabi	Female .	7	9	March 1895 .	40	60	20 0	,,	225	133	7	2,605	
3	Viper	,, .	7	10⅜	Before March 1886 .	*36	59	29 0	,,	52	223	90	...	
4	Bhokaung . . (Tusker)	Male .	8	4½	March 1894 .	36	57	21 0	Good	226	80	59	4,088	
5	Hannah	Female .	7	6	Before July 1891 .	*33	56	over24 0	,,	217	103	45	...	In calf.
6	Wellington . (Tusker)	Male .	8	3¼	March 1895 .	35	55	20 0	,,	125	52	188	3,855	
7	Sahpah . . ,,	,, .	8	4	,, 1894 .	33	54	21 0	,,	250	115	...	3,538	
8	Mahpah	Female .	8	0	,, 1894 .	33	54	21 0	Fair	184	91	90	2,813	
9	Pagi	,, .	7	9	,, 1894 .	32	53	21 0	Good	244	117	4	2,713	
10	Bhairon Parshad (Tusker)	Male .	8	4	December 18 5 .	32	52	over19 6	,,	183	87	95	3,488	
11	Australia . . .	Female .	7	7½	Before March 1886	*28	51	29 0	,,	224	141	..	...	
12	Jangipur . . .	,, .	7	10½	April 1891 .	*28	51	24 0	,,	150	100	115	3,025	
13	Paul . . (Tusker)	Male .	8	9	March 1895 .	30	50	20 0	,,	245	118	2	3,763	
14	Bahram . . ,,	,, .	8	7	December 1895 .	28	48	19 6	,,	205	113	47	3,855	
15	Mipu	Female .	7	1	21st February 1907	40	48	8 5	,,	144	125	96	4,972	
16	Kawal	,, .	...	...	26th April 1906 .	38	46½	8 6	...	43	33	45	6,312	Died on 19th October 1914.
17	Adolphus . . (Tusker)	Male	7	11	Before March 1886	*23	46	over29 0	Good	50	51	264	...	
18	Lily	Female .	8	0	11th February 1902	30	43	13 4	,,	236	127	2	4,523	
19	Bhola Nath . (Tusker)	Male .	8	7	28th ,, 1903	30	42	12 5	,,	165	195	5	5,914	
20	Latchmi Parshad ,,	,, .	9	2	28th ,, 1903	30	42	12 5	Fair	46	110	209	6,415	Unfit for dragging.
21	Aurangabad . . .	Female .	7	8	May 1892 .	17	40	23 0	Good	113	152	...	2,530	
22	Meerut	,,	8	4	11th February 1902	27	40	13 4	,,	246	118	1	4,523	
23	Sangeswar (Tusker) Parshad.	Male .	8	8	3rd January 1905 .	30	40	10 6	Fair	158	100	107	6,464	
24	Gulbadan . . .	Female .	7	9	11th February 1902	26	39	13 4	Good	87	268	10	4,523	In calf, see below.
25	Delhi	,, .	7	10	11th ,, 1902	26	39	13 4	,,	219	144	2	4,523	
26	Motimala . . .	,,	7	10	11th ,, 1902	25	38	13 4	,,	233	106	26	4,523	
27	Gopal Das . (Tusker)	Male .	9	1	28th January 1903	25	37	12 5	,,	200	151	11	6,215	
28	Sunder Parshad ,,	,, .	9	2	28th ,, 1903	25	37	12 5	,,	250	114	1	5,915	
29	Tupong . . ,,	,,	...	...	26th April 1906 .	28	31	8 4	....	27	4	22	6,312	Died on 22nd August 1914.
30	Pawan Piyari . . .	Female .	7	6	25th May 1911 .	32	36	4 1	Good	242	115	8	5,543	
31	Ganga Parshad . (Tusker)	Male .	8	6½	3rd January 1905 .	25	35	10 6	,,	272	80	13	6,464	
32	Amir . . ,,	,, .	8	4	28th ,, 1903 .	23	35	12 5	,,	174	74	117	5,915	
33	Sunder Mala . . .	Female .	7	3	25th May 1911 .	30	34	4 1	,,	211	143	11	4,493	
34	Madho	,, .	8	0	26th April 1906 .	23	32	9 2	,,	117	174	44	6,312	
35	Bateswar . . .	,,	7	2	25th May 1911 .	30	34	4 1	,,	210	99	56	5,493	
36	Maxie	,, .	7	7½	Born in January 1896.	* 6	29	13 0	,,	281	84	...	...	
37	Latchmania . . .	,,	7	2	25th May 1911 .	22	26	4 1	,,	257	103	...	4,633	
38	Megmala . . .	,, .	6	10	25th ,, 1911 .	20	24	4 1	,,	186	179	...	4,392	
39	Sudamani . . .	,, .	6	9	22nd June 1911 .	14	18	4 0	,,	120	245	...	3,250	
40	Chester Bahadur . .	Male .	8	C½	Born in August 1897	5	18	...	,,	250	113	2	...	
41	Schlich Bahadur . .	,, .	7	8	Born in January 1900.	3	16	...	,,	104	65	196	...	
42	Jai moti . . .	Female .	5	4½	25th May 1911 .	2½	C½	...	,,	4	359	2	375	Calf of Dharam Piyari
43	Nur Jahan . . .	,, .	4	1	Born in March 1914	...	1	...	,,	...	365	...	...	Calf of Gulbadan.

S.G.P.I.—139 R.&A.23-4-16-200.

*Estimated age on 31st March 1892.

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REPORT

ON

FOREST ADMINISTRATION IN THE ANDAMANS

FOR THE YEAR

1915-16.

BY

F. H. CAVENDISH
Deputy Conservator of Forests.

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No. 226-F., dated 23rd April 1917.

File No. 27 of 1917.

From—A. E. GILLIAT, Esq., I.C.S., Under Secretary to the Government of India, Department of Revenue and Agriculture,

Serial No. 2.

To—The Superintendent of Port Blair.

I am directed to acknowledge the receipt of your letter No. 3385, dated the 6th January 1917, submitting the annual report on Forest Administration in the Andamans for the year 1915-16.

2. The report has been read with interest and I am to say that the Government of India have been pleased to observe the steady increase in the outturn of forest produce and of the revenue derived therefrom, notwithstanding the chronic difficulty connected with the available labour supply. On the other hand, the failure to carry out the thinnings and cleanings prescribed in the working plan is to be regretted : it is hoped that it will be found possible to attend to these important works in future.

The Government of India endorse your remarks regarding the good work done by Messrs. Grieve and Cavendish and the other officers mentioned by you.

3. I am to draw your attention to the question of the price charged for fuel supplied to the Settlement referred to in paragraph 2 of your letter. The present price of Rs. 4 per cord was fixed by the Government of India in paragraph 3 of Mr. Emerson's letter No. 1305-F., dated the 3rd December 1915, on the understanding that this rate would yield a profit of 20 per cent., as stated in paragraph 2 of your letter No. 962-VII-13(*a*), dated the 10th June 1915. The correctness of this statement seems open to question and I am to say that the Inspector General of Forests has been instructed to enquire into this matter when he next visits the Andamans.

34RAD—229—5-5-17—GCBP Simla

Report on Forest Administration in the Andamans for the year 1915-16.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

SECTION 1.—ALTERATION IN AREA. (*Form No. 7.*)

1. 8,031 acres of Dhani Khari reserve were disforested and reconstituted into the following. Declared to be reserved forests during the year :—

1. Portmouat Block 6,300 acres.
2. Bumlitan Block 496 „

The balance of the area 1,235 acres or 1·93 square miles was excluded from the reserve and transferred to the Settlement.

2. 212 acres of unclassed forests are reported by the District officers to have been cleared for cocoanut plantations in the South Andaman Settlement.

The area of reserved forests in the Settlement area of the South Andaman amounted to 83·29 square miles at the close of the year.

SECTION 2.—FOREST SETTLEMENTS. (*Form No. 8.*)

3. 1,235 acres equivalent to 1·93 square miles were excluded from the reserved forests and transferred to the Settlement during the year.

SECTION 3.—DEMARCATION. (*Form No. 9.*)

4. The boundary lines of Ali Musjid and Dhani Khari reserves aggregating 6·39 miles were cleared and stone pillars erected on them during the year at a cost of R29.

The total length of boundary, after excluding the area of 1,235 acres of reserve forests disforested, is now 114·91 miles, of which 77·48 are natural and 37·43 miles are artificial.

SECTION 4.—FOREST SURVEYS. (*Form No. 10.*)

5. No Survey work was undertaken by the Survey of India during the year; but an expenditure of R1,049, incurred by them in connection with the Survey of Middle Andaman completed last year, was adjusted during the year. Maps have not yet been received for the areas surveyed during the 2 previous years.

6. A Departmental Survey of plantation boundaries, 8″=1 mile scale, was carried out during the year at a cost of R34.

7. The total expenditure under survey amounted to R1,083 during the year.

8. The total expenditure on the constitution of State forests was R1,112.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

SECTION 1.—REGULATION OF MANAGEMENT.

(*a*) *Preparation and control of Regular Working-Plans.* (*Form No. 11.*)

9. The Working-Plan report for the Padauk forests of the Andamans submitted last year was sanctioned printed and circulated during the year.

10. This Working-Plan has been drawn up on the assumption that the outturn of the North and Middle Andaman would be leased to a private Firm. It is believed, however, that the lease may not be given, in which case the Forests will be worked departmentally.

(*b*) *Preliminary Working-Plan Reports.*

11. No attempt was made to explore the Little Andaman during the year owing to the Forest Controlling Staff being employed fully on more important works.

(*c*) *Annual Plan of operations.*

12. The Working-Plan was brought into force with retrospective effect from February 1915, and its prescriptions are being followed as far as possible.

13. Timber and other produce were extracted for export and local requirements from Compartments 25, 26, 27, 29, 30 and 31 sub-periodic Block 111 of the Middle Andaman during the year.

14. Owing to the scarcity of labour, cleaning and thinning operations prescribed in the Working-Plan could not be carried out.

SECTION 2.—COMMUNICATIONS AND BUILDINGS. (*Form No. 12.*)

(*a*) *Roads and Bridges.*

15. *The Wimberley Gunj Tramway.*—The total length of permanent-way remained unchanged at 6 miles with 36 masonry and 25 wooden bridges, and one corrugated iron culvert. Six wooden girders of bridges on the permanent line have been replaced by new girders of *Mesua ferrea* (Gangaw). 566 sleepers have been renewed in the permanent line.

The rolling stock consists of 2 Locomotives (one belonging to the Settlement) 49 large, and 15 small wooden trucks, and 9 iron trucks.

There were no derailments or accidents during the year.

6,082 cords of fuel were extracted at a cost of R30,794 and sold for R24,328 against 4,216 cords extracted last year at a cost of R27,118 and sold for R16,864. It will be observed these operations were carried out at heavy loss to the Forest Department this year amounting to R6,466. The rate at which fuel is sold by the Department should be raised to cover this loss.

The considerable increase in extraction was due to the greater demand of fuel by the Settlement and to the fact that less fuel was extracted by the Settlement itself than in the previous year.

16. The expenditure on maintenance of the permanent line was R604 as against R869 in the previous year.

17. *Temporary lines.*—One mile of temporary line was laid down, whilst 0·73 mile was lifted during the year. There were 4·75 miles of temporary lines as against 4·50 miles in the previous year.

The total expenditure incurred on maintenance, laying and lifting was R1,108 as against R958 incurred in the previous year.

18. *Roads and Bridges.*—A further alignment of 4 miles of the road through the Middle Andaman was made and the earth cutting completed. 3 miles of road aligned last year were soled and metalled. 1¾ mile of road which was originally metalled 8 feet wide proved insufficient and had to be re-made 10 feet wide.

The total expenditure on this work was R8,932, of which R8,618 has been charged to timber extraction and the remaining R314 under A.VII, *a*.

(*b*) *Buildings.*

19. *Construction.*—The construction of the following buildings was completed:—

	R
Quarters for the Deputy Ranger, Revenue Range	844
Permanent rest house at Bomlungta	531
Workshop at Chatham	63
Timber shed at Chatham	32
Convict Barrack at Haddo	2,744

The construction of quarters for the office clerks was not undertaken by the Public Works Department owing to other urgent works of the Settlement.

20. *Repairs.*—The following buildings were repaired during the year :—

	R
Subordinate quarters at Haddo	9
Sawmill Engineer's quarters at Chatham	336
Store Keeper's quarters at Chatham	31
Convict Barrack No. 4 at Wimberley Gunj	2

The expenditure incurred in the construction and repairs of Buildings was R4,602 as against R4,189 in the previous year.

21. *Temporary Buildings.*—These consist of kutcha huts at Forest Camp for the Forest staff, Police and working convicts. A total sum of R616 as against R701 in the previous year was incurred and this was charged to Departmental extraction of timber and fuel.

(*c*) *Miscellaneous works.*

22. A sum of R113 was spent on clearing compounds of the rest houses at Long Island and Bomlungta, and R3 for the Jetty at Long Island.

23. The total expenditure under A.VII. as shown in Form No. 12 is R5,636 as against R4,189 in the previous year.

Section 3.—Protection of Forests.

(*a*) *General protection.* (*Form No. 13.*)

24. There were 20 cases of unauthorised felling reported involving 28 men who were prosecuted as against 7 (Revised) cases involving 16 men in the previous year.

In 19 cases involving 27 men, one was made to pay the royalty due, 25 were fined and one was acquitted.

Another case resulted in the acquittal of one man.

(*b*) *Protection from fire.*

25. No fire occurred during the year.

(*c*) *Protection from cattle.* (*Form No. 16.*)

26. The number of cattle impounded for grazing in plantations was 134 as against 267 last year. All the cases occurred in plantations bordering on the grazing grounds near Wimberley Gunj.

344·51 square miles in the South Andaman are nominally open to grazing where neither grazing nor fodder grass is available.

(*d*) *Protection against injuries from natural causes.*

27. *Damage by insects.*—Some damage was done to the young plants in the Padauk plantation of 1913-14 and to the rubber plantations of 1906 to 1915.

Seedlings and young rubber plants are attacked by a large white grub which feeds on the roots and kills the very young plants. This is the larvæ of a melolonthian beetle probably *Lepidota pinguis.*

28. *Wild pigs.*—Considerable damage has occurred to the young rubber plants of 1913-14-15. The area planted this year was therefore strongly fenced with bullies. The cocoanut plantation at Long Island was also fenced for the same reason.

29. *Climbers.*—These are very troublesome in all young plantations if not kept back by frequent cleaning and weeding.

30. *Wind.*—The growth of young rubber plants is much retarded by this element. The largest and best grown rubber plants are those growing on areas well sheltered from wind. *Albizzia moluccana* is not at all affected by the wind owing to its light crown and deep roots.

SECTION 4.—SYLVICULTURE.

(*a*) *Natural reproduction.*

31. The sample plot in Bomlungta cleared of jungle last year was found to be densely covered with undergrowth of fast growing plants entangled with climbers and creepers, while the padauk seedlings reported last year had mostly disappeared. Good germination of padauk seedlings was found in last year's fellings around the stumps of trees which had been felled during the dry season after seed had ripened on the trees. On the other hand very few seedlings were present where the trees had been felled during the rains and they were rare in places where no seed bearers were near the trees felled.

32. In order to induce natural regeneration it would therefore seem advisable to carry out the fellings, if possible between the months of January and June during which period the seed ripens.

Padauk seeds germinate freely under seed bearers on open spaces where the ground is clear of undergrowth. After germination it appears the seedlings require weeding for 2 years before they can take care of themselves.

The natural reproduction of gurjan in a sample plot at Wimberley Gunj is good; but it requires frequent cleaning.

(*b*) *Artificial reproduction.* (*Form No. 18.*) *Regular Plantations.*

33. *Mangrove.*—The area under mangrove remains the same as last year *viz.*, 685 acres. No Sylvicultural or other operations were carried out, for want of labour.

34. *Rubber* (*Hevea brasiliensis*).—During the year 165 acres of rubber were planted out, bringing the total area to 500⅛ acres.

13,636 rubber stumps were put out in last year's plantation to fill up vacancies caused by drought.

On flat land plants are being put out on the Hexagonal method 22′×22′ a part, giving 104 trees to the acre.

On hilly ground the plants are put out 15′ apart along contours, while the contour lines are about 30′ apart. This method gives 96 plants to the acre. The advantage claimed for this method is that it facilitates tapping on hilly ground.

35. No tapping was made during the year. It was decided 2 years ago that no tapping should be done unless there are at least 1,000 trees available for the purpose.

There are now 1,026 trees 18″ and over in girth at 3′ from the ground. At this size it is stated trees can be tapped. Tapping operations will be commenced as soon as arrangements can be made.

36. There were 4 nurseries at the close of the year, whilst a fifth is being prepared for the reception of rubber seed from the older plantations.

37. A sum of R10,231 was spent on the rubber plantation during the year against R13,655 spent last year.

38. *Afzelia and Mahogany.*—The area remains the same as last year, *viz.*, 8 acres. R4 were spent on it for cutting climbers and for opening out the canopy.

39. The area of old Teak and Padauk plantation in the Goplakabang valley (1883 to 1890) was reduced from 122 acres to 98½ acres or by 24½ acres due to re-survey at a cost of R18.

40. The old lines of Teak and Padauk in Ali Musjid reserve remain at 1,270 acres as last year.

Cultural operations.

41. Twenty-five acres have been added to the area of padauk plantations of 1903 to 1911 owing to correction in area after re-survey, thus bringing the total area of these plantations to 1,303 acres at the close of the year.

The cost of weeding and clearing boundaries amounted to R457.

42. The padauk area sown broadcast in 1912 was cleaned. The boundary of this area was cleared for survey at a cost of R37. The area remains the same as last year, *i.e.*, 20 acres.

43. The teak and padauk plantation of 1913 was increased by 1½ acres due to re-survey, making a total of 35 acres. Both the teak and padauk on this area are doing remarkably well. The best teak trees are from 25′ to 30′ high with a girth of 3′ whilst the best padauk are from 14′ to 18′ high with girths from 9″ to 12″. This plantation was thoroughly cleaned and its boundary cleared for survey at a cost of R75.

44. The teak and casuarina plantation of 1913 was increased from 52 to 55 acres or by 3 acres, due to re-survey. The casuarina has not been a success, but the teak is doing very well. This area is more or less completely stocked. No sylvicultural operations were carried out but a sum of R74 was spent on clearing the boundary lines for survey.

45. The teak and padauk plantation of 1914 was increased by 8 acres due to re-survey, bringing the total area to 88 acres. This area was thoroughly cleaned and the boundary lines cleared at a cost of R216.

46. The new plantation of 1916 covers an area of 200 acres, of which 130 acres were sown with pure teak in lines 6′ apart, the sowings in the lines being 3′ apart; the remaining 70 acres were sown up with teak in lines 12′ apart; the seeds being put in 3′ apart in the lines, in between the lines of teak, padauk seed was dibbled in about 18″ apart instead of being sown broadcast. The expenditure incurred in cutting jungle, burning and heaping, and stacking and sowing amounted to R2,822.

The germination of the teak seed has been a failure, only about one per cent. of the seed having come up.

(*c*) *Operations for the improvement of the growing stock.*

47. Climbers were cut on padauk trees only in compartments 25, 31 and 32 and small portions of compartments No. 22, 24 and 28 sub-periodic block 111 Middle Andaman over an area of 10,080 acres at a cost of R228.

This operation is in the writer's opinion insufficient. All climbers should be cut throughout padauk bearing areas and not only on padauk trees. If this were done it is believed the natural regeneration of padauk would benefit considerably, in addition to the benefit to the growing stock. The girdling of inferior species interfering with padauk, judiciously carried out at the same time, should further tend to improve the growing stock and assist natural regeneration of the padauk.

(*d*) *Experiment.*

48. The area under Eucalyptus, *viz.*, 15 acres, which were planted out with a view to the future fuel supply was abandoned as the plants in this area are very poor and require frequent clearing.

49. *Albizzia Moluccana.*—One acre was excluded from this area due to re-survey, leaving 69 acres at the close of the year. The trees in this area have attained a height of 30′ to 35′ by 1½ to 2′ in girth whilst those on gurjan soil are from 40′ to 45′ and 2′ to 3′ in girth measured at 3′ above ground.

Section 5.—Exploitation.

(*a*) System of management.

(*i*) *Major Forest produce.*

50. Improvement fellings as prescribed by the working plan were completed in compartment No. 26 of the Middle Andaman. It is hoped that labour will be forthcoming to the remaining compartments in the Middle Andaman as soon as extraction is completed.

Owing to the leasing of the outturn of the North and Middle Andaman not taking place, extraction of timber was carried out departmentally in order to meet the requirements of the Settlement and the Indian market.

51. Marking operations were carried out in compartments 25 and 32 and portions of 22, 24 and 28 of Middle Andaman. 4,230 padauk, 1,848 pyinma and 28 koko trees were marked for felling.

52. Fellings were made in compartments 25, 26, 27, 29, 30 and 31 of the Middle Andaman during the year. 1,890 padauk, 421 pyinma and 342 koko trees were felled.

53. *Fuel.*—About 200 acres of high forest was clear felled to provide fuel for the Settlement.

54. *Charcoal*—was manufactured at Long Island from November to June. The patent charcoal retort referred to in the previous report was only partly supplied. Until the remaining parts are received the plant cannot be used.

(*ii*) *Minor Forest produce.*

55. Bamboos and canes were cut from Kalatang and Shoal Bay throughout the year for the requirements of the Settlements, and for use departmentally.

(*b*) Agency of Exploitation. (*Forms Nos. 19 and 20.*)

(*i*) *Departmental Agency.*

56. The greater part of the timber and fuel extracted was, as usual, by Departmental Agency. The following are the percentages :—

Timber	89 per cent. by value	against 87 per cent.	last year.
Fuel	66 „ „	„ 63 „	„
Minor produce	11 „ „	„ 10 „	„

This represents an increase of 2 per cent. in timber, 3 per cent. in fuel, and 1 per cent. in minor produce on the corresponding figures of the previous year.

57. *Major produce.*—The following quantities of timber shipped during the year compare with those of the preceding year as follows :—

Kind of Timber.	1915-16.	1914-15.	Difference.
	Tons.	Tons.	Tons.
Rough hewn Padauk	2,714	2,314	+400
„ „ Pyinma	462	171	+291
Mill Sawn timber	1,424	1,187 (Revised)	+237

58. *Fuel.*—7,009 cords were supplied to the Settlement against 4,657 cords last year. The demand of fuel by the Settlement has increased considerably owing to a reduction in the consumption of coal.

The "Rosamond" and other launches used 1,380¼ cords of which 356¼ cords were cut in the forest camp and 1,024 cords from the Sawmill wastage. The Locomotives used 132¾ cords and Sawmill furnaces consumed 739 cords against 112 cords and 672 cords respectively in the previous year.

59. *Charcoal.*—4,363 maunds were supplied to the Settlement against 6,008 maunds last year. The decrease is due to a smaller demand by the Settlement.

60. *Major produce.*—Cane was supplied for the local manufactures in the Jail and Workshops as usual.

61. *Transport by land.*—The extraction of timber from the forests is chiefly done by elephants. 10 pairs of buffaloes have been purchased and have been employed for the extraction of small logs during the year. It is believed that with the aid of Monorails similar to those used in Siam (*vide* Indian Forester for March 1916, page 153) buffaloes could be usefully employed to extract large and small timber from areas where there are no floating streams, and thus save elephants dragging over long distances thereby reducing the cost of extraction.

62. A list of elephants with details of the number of days worked by them and their condition is given in Appendix I. There have been no casualties during the year.

63. Fuel for the Settlement has been carried by the Wimberley Gunj tramway as usual.

64. *Transport by water.*—The "Rosamond" brought in 11,388 tons of timber against 7,254 last year, whilst S. L. "Eileen" towed rafts of 76 tons against 1,907 tons last year. The total amount of timber carried to Port Blair was 11,464 tons against 9,161 tons last year. The considerable increase is due to the fact that "Rosamond" continued running throughout the year excepting for 15 days from 27th March to 10th April when she was sent up for her annual repairs to Rangoon. As against 37 days she was not working in the previous year.

65. The total revenue of the year from produce extracted by Departmental Agency was R4,56,461 against R3,89,977 last year.

(*ii*) *Purchasers.*

66. *Major produce.*—The revenue from standing timber sold to purchasers was R5,845 as against R3,067 in the previous year. The increase was due to a slight increase in the amount of timber exported by purchasers.

Fuel.—The revenue from fuel amounted to R161 against R96 last year. This was due to more fuel being extracted by purchasers for the requirements of the Military Police.

Bamboos.—Rs. 41 was realized against Rs. 43 last year.

Minor produce.—Rs. 263 was realized against Rs. 282 last year.

The total revenue derived from all produce removed by the purchasers amounted to R6,310 as against R3,488 in the previous year.

(*iii*) *Rights and privileges.*

67. There are no right holders. The estimated value of produce removed by the District Officers and privileged villagers was R12,572 as against R14,272 in the previous year.

(*iv*) *Free grants.*

68. Officers of the Settlement cut and utilized fuel free of charge for convict bhandaras: for Tea Gardens 249 cords and for other stations 1,243½ cords, total 1,492½ cords as against 2,012 cords in the previous year.

69. Free grants of sawn timber 18 c.ft. valued at R26 were made to the Gymkhana club, and 30 c.ft. of Red Bombwe sleepers valued at R43 to the Eastern Bengal State Railways for experimental purposes.

Free grants of timber as samples were made to—

				R
Messrs. Skipper & Co., Calcutta	33	c. ft.	valued at	27
The Resident Engineer, Port Commissioner, Rangoon .	36	„	„	64
The Superintendent, Rifle Factory, Ishapore, Calcutta .	47	„	„	78
The Principal, Carpentry School, Bareilly . .	30	„	„	10
The Manager, Crown Rubber Estates, Mergui . .	4	„	„	5

70. The following table shows the quantity and value of all forest produce removed free of charge by District Officers and villagers :—

—	Timber.		Fuel.		Bamboos.		Other minor produce.	Total.
	c. ft.	Value.	c. ft.	Value.	No.	Value.	Value.	Value.
		R		R		R	R	R
District Officers . . .	32,006	1,000	1,19,360	2,934	3,43,413	215	154	4,353
Villagers	25,650	695	2,05,200	5,130	3,42,000	214	2,180	8,219
Total .	57,656	1,695	3,24,560	8,114	6,85,413	429	2,334	12,572

(*c*) *Outturn and sources of forest produce.*

(*Forms Nos 19 and 20.*)

71. The following table compares the outturn of the year classified according to the agency of exploitation and kind of produce extracted with the figures of 1914-15 :—

Agency of exploitation.	Year.	Timber.	Fuel.	Bamboos.	Minor produce.
		c. ft.	c. ft.	No.	R
Government Agency . . .	1915-16	7,57,699	6,91,866	1,25,006	289
	1914-15	5,65,463	7,02,227	1,48,234	303
Purchasers	1915-16	38,304	25,440	66,550	263
	1914-15	29,181	13,360	80,300	282
Free Grantees	1915-16	25,650	2,05,200	3,42,000	2,180
	1914-15	28,800	2,30,400	3,84,000	2,448
District Officers	1915-16	32,006	1,19,360	3,43,413	154
	1914-15	25,309	1,60,960	2,02,291	253
GRAND TOTAL .	1915-16	8,53,659	10,41,866	8,76,969	2,886
	1914-15	6,48,753	11,06,947	8,14,825	3,286

The considerable increase in the outturn of timber extracted by the Departmental Agency was mainly due to the introduction during the last quarter of a system of control over dragging work by elephants which resulted in a large increase in extraction. 10 pairs of buffaloes have also been employed for extraction of small logs, but this latter has not proved very satisfactory so far.

The decrease in fuel removed by departmental agency was due to a large amount of fuel for the "Rosamond" being obtained from the Sawmill.

The decrease in bamboos was due to a smaller demand by the Settlement. Bamboo fencing around the rubber plantation was replaced by wooden fencing to protect the young plants against the damage by wild pigs.

The decrease in minor produce was due to the fact that timber was used instead of cane for the repairs of timber depôt fences.

With regard to the produce extracted by purchasers the increase under timber was due to a large amount of timber having been extracted for export. The increase in fuel was due to larger quantities of fuel being extracted to meet the requirements of the Military Police.

The decrease in minor produce was due to the fact that many houses in the Settlement were converted into stronger timber buildings.

The decrease in timber, fuel and other produce removed by the free grantees was due to there being 1,700 houses in the Settlement as against 1,920 houses reported last year.

The increase under timber and bamboos removed by the District Officers was mainly due to the fact that more materials were extracted by the Settlement for fencing the cocoanut plantations. The decrease in fuel was due to the Settlement having obtained a greater supply from the Forest Department. This is partly due to the clearing of accessible land for cocoanuts, etc., in the Settlement thereby causing fuel contractors greater difficulty in obtaining fuel close at hand.

72. The following table shows the timber in the round supplied to the Chatham Sawmill and the outturn obtained:—

Year.	Timber sent to sawmill.		Timber received from sawmill.	Percentage of loss in conversion.
	No. of logs.	Volume.		
1915-16 . . .	7,523	3,44,265	1,50,971	56
1914-15 . . .	6,446	3,05,855	1,26,041	59

The Sawmill produced more timber than last year, the wastage being 3 per cent. less than the previous year.

73. The total expenditure on the management of State forests during the year was R3,57,577 against R1,68,092 last year. The considerable increase in expenditure was chiefly due to the following extraordinary expenditure of R1,35,113 incurred for the new sawmill, R13,636 for the new launch "Surmai" and R16,036 for the purchase of live-stock.

CHAPTER III.—FINANCIAL RESULTS. (*Forms 21, 22, 23, 24, 25, 26 and 27.*)

74. The income and expenditure of the year are compared with that of the previous year and with the average of the preceding 5 years in the following statement:—

—	1915-16.	1914-15.	Average 1909-1914.
	R	R	R
Revenue	4,63,332	3,94,356	4,15,555
Expenditure A	3,58,689	1,93,707	1,94,416
Expenditure B	69,549	78,088	52,425
Total Expenditure .	4,28,238	2,71,795	2,46,841
Surplus . . .	35,094	1,22,561	1,68,714

The increase in revenue was principally due to more timber having been exported and to an increased demand in the Settlement. Better prices were also obtained in the markets.

The considerable increase in expenditure was principally due to extraordinary expenditure incurred on the New Sawmill, new launch "Surmai" and to the purchase of live-stock amounting in all to R1,64,785.

The prescribed analysis shows that 98·95 per cent. of the receipts came from major produce and 0·93 per cent. from minor produce, whilst revenue from miscellaneous sources was 0·12 per cent.

Of the expenditure only 3·78 per cent. was incurred in constitution and improvement, whilst 79·98 per cent. was incurred in connection with exploitation, and 16·24 per cent. on the administration and protection of the forests.

The percentage of net income was only 7 per cent. against 31 per cent. in the previous year. If the extraordinary expenditure of R1,64,785 above referred to were excluded from the calculation, the net income would work out to 43 per cent. against 31 per cent. in the previous year.

75. The outstanding revenue at the end of the year amounted to R92,515 against R64,101 at the end of the previous year.

76. The outstandings due to this Department by contractors and disbursers representing advances recoverable amounted to R76-15-8 at the commencement and R1,595-13 at the close of the year or R1,518-13-4 against the year.

77. The balance of timber in stock in Ghat and Sale Depôts at the close of the year was 2,12,212 c. ft. against 1,22,901 c. ft. at the close of the previous year. Timber was accumulated to meet the requirements of the new Sawmill.

The balance of firewood and charcoal in stock in Ghat and Sale Depôts at the close of the year was 17,145 c. ft. against 61,788 c. ft. at the close of the previous year.

The balance of minor produce in Ghat and Sale Depôts amounted to R118 at the close of the year against R458 at the close of the previous year.

The estimated value of timber in the shape of round logs and scantlings, and other produce stored at Sale Depôts at the close of the year was R2,31,118 against R1,32,511 at the close of the previous year, or R98,607 in favour of the year.

78. The value of live and dead stock at the close of the year, excluding the value of six elephants purchased during the year, amounted to R2,88,253 against R2,91,015 at the close of the previous year, or R2,762 against the year.

The six elephants which have been purchased during the year have been excluded as they have not yet been brought to this Division.

There were 41 elephants including two calves in the Division at the close of the year or the same number as last year. There were no casualties during the year.

Six elephants and one calf was purchased during the year at a cost of R15,500, but they are still in Jalpaiguri and will be brought down in the cold weather. In addition to the original price the cost of transport from Jalpaiguri to the Andamans will have to be paid. This is estimated at R1,000 each.

Fourteen buffaloes were purchased during the year. One buffalo died. There were 20 buffaloes on the books at the close of the year.

CHAPTER IV.—ADMINISTRATION.

79. *Inspection.*—The Division was not visited by the Inspector-General of Forests during the year.

Mr. J. W. A. Grieve, Deputy Conservator of Forests, held charge of the Division from the beginning of the year up to the forenoon of the 18th February 1916 when he made over charge of the Division to the writer of this report.

The latter inspected the Divisional Office between 7th to 9th June 1916.

Mr. Bonig held charge of the Chatham Sub-Division from July to February and also attended to works in extraction camps. During this period from 4th to 30th January 1916, he was deputed to the Nicobars to make a report *re* the capabilities for development in the Nicobars. He was again deputed from the 14th February 1916 to 26th May 1916 to purchase elephants for the Department in Jalpaiguri. On his return he has been put in charge of extraction work, etc., in the Middle Andaman. He has rendered most energetic and ungrudging assistance and owing to this, conditions are being rapidly improved in spite of shortness of the labour supply.

Mr. Brown was in charge of the Wimberley Gunj Sub-Division, including the rubber plantatio throughout the year. The area of the latter has been again largely increased during the year. His work has been carried out very efficiently and the success of recent plantations is largely due to his care.

Mr. Miller was in charge of the Revenue Range, up to October 1915, when he proceeded to Middle Andaman for marking trees. He was on special duty from September to October in connection with the naval authorities. After this he was again engaged on marking for the greater part of the remainder of the year. His marking work has been carried out thoroughly and efficiently.

Mr. Parkinson was engaged throughout the year on botanical work in connection with the preparation of the Andamans Forest Flora. He was deputed to the Calcutta Herbarium from 8th May to 30th June 1916 for completing the descriptive list.

Mr. Alfred was transferred to Prome Division during the year and left the Settlement on the 22nd August 1915.

Mr. Robertson having failed to obtain a certificate the term of his probationary period ceased and his services were dispensed with from the 17th April 1916 when he joined the Port Defence Volunteers, Rangoon.

80. Babu Atma Singh, Forester, was deputed to the Rangers Course, 1916-18 at Dehra Dun.

Babu Hira Lal, Deputy Ranger, was deputed to undergo training in the Kurseong Forest School. The school progress report of the latter is satisfactory.

Rangers Maung Shwe Paung and Maung Tun Nyun were deputed to this Division from Burma for three years and joined their duties on the 5th November and 31st December 1915 respectively. The former has been engaged assisting Mr. Miller in marking trees and on improvement fellings. The latter has done good work on constructing new roads.

One acting Deputy Ranger was degraded to Forester for bad work. Subsequently his services were dispensed with.

2 Foresters were appointed to fill existing vacancies.

1 Deputy Ranger and 2 Foresters were confirmed in their posts.

1 Forester resigned his appointment.

1 Deputy Ranger was murdered by his Revenue Chaukidar on the 29th September 1915.

81. *Office Establishment.*—The services of 2 clerks were dispensed with, one being pronounced medically unfit for further service and the other for overstaying his leave and not rejoining. One clerk was on medical leave for 6 months.

Most of the clerks have suffered severely at times from fever and some difficulty has been experienced in carrying on the routine work in the office. During June the health of the office establishment was bad in consequence of which there was undue delay in preparing the statistics and forms for the Annual Report.

The Head Clerk, C. Vijiarangam Moodaliar, has worked diligently. I am satisfied that most of the other clerks have also tried to do their work, but there is a want of cohesion and combination noticeable which I hope will disappear, when work for all will be easier.

82. Assistant Serang, Kutub Din, was transferred to Marine Department.

83. Mr. Morris was employed as Sawmill Engineer throughout the year. He was deputed to Java for supervising the dismantling of the Semampir Sawmill. He left on the 22nd August 1915 and returned on the 20th November 1915. He was also deputed to Rangoon from the 4th to 30th June 1916 for studying sawmill method in cutting, saw setting, etc. Since the close of the year and soon after his return, however, he announced his intention of resigning his appointment giving the three months' notice required under his agreement.

CHAPTER V.—GENERAL.

84. *Sawmill.*—The Sawmill produced 3,027 tons of sawn timber as against 2,522 tons in the previous year. The opening balance was 825 tons.

Disposals were as follows:—

	1915-16. tons.	1914-15. tons.
Balance	...	606
Public Works Department	478	459
War 1915 and 1916	367	...
Settlement	224	241
Exported	1,275	1,107
Exported on Commission sale	149	80
Departmental use	435	325
Miscellaneous sale	16	102
Free grant	1	5
Bombay, Burma Trading Corporation, Port Blair	2	...
Written off	1	3
Loss in reconversion	15	31
Total issues	2,963	2,353
By stock	3,852	3,178
Balance on 30th June 1916	889	825

45,350 shingles, equivalent to 15 tons, remained in stock at the close of the year against 1,30,800 shingles equivalent to 44 tons at the close of the previous year.

The cost of operating the sawmill was as follows:—

	R
Salaries of permanent establishment	720
„ of temporary „	4,276
Convict labour	19,629
Stores purchased	3,011
„ issued from stock	3,018
Repairs by local workshops	1,174
Timber issued from stock	233
Fuel consumed	739
Total	32,800

The cost of sawing on the outturn of 3,027 tons was R10-13 per ton against R11-14 per ton last year.

The mill engines were in charge of Mr. W. H. Morris, Sawmill Engineer, for nine months of the year. For the remaining three months they were under Engineer W. W. Collins, R.I.M., Engineer and Harbour Master, while the former was absent on deputation to Java in connection with the purchase of the new sawmill.

85. The construction of the new sawmill in Port Blair was undertaken during the year by the Bombay, Burma Trading Corporation, Limited. The work was not completed at the close of the year.

86. *Marine.*—The following are the details of cost of running and maintenance of the Forest Department steamers and launches, etc., during the year:—

Name.	Cost of			Total.	Total expenditure of previous year.	Time spent in dock.	Remarks.
	Stores, etc.	Establishment.	Repairs.				
1	2	3	4	5	6	7	8
"Rosamond" Steamer .	8,205	9,908	(a) 3,889	22,002	21,781	27th March 1916 to 10th April 1916.	(a) Including R540 spent in Navigation charges. The cost of repairing at Rangoon, *viz.*, R8,409 was not adjusted during the year.
S. L. "Eileen" . .	(b) 5,592	1,831	(c) 8,343	15,766	4,922	1st February 1915 to 6th November 1915.	(b) Including R4,368 for new boiler. (c) Including R5,197 for re-construction. The new boiler has not yet been put on.
S. C. "May" . .	337	1,132	238	1,707	1,624	...	
S. C. "orothy" . .	409	647	483	1,539	973	...	
S. L. "Surmai" . . (under construction).	...	...	...	(d) 13,637	11,906	...	(d) Part construction at Kidderpore Dockyard.
Boats and Lighters .	1,246	4,772	(e) 893	6,911	1,090	...	(e) Including R62 spent for the construction of a new Dingy at Chatham.
Total .	...	...	...	61,562	42,496	...	Total cost of running and maintenance.

87. *Labour.*—Enquiries have been made and a few suitable people have agreed to settle. It is hoped to form a small Forest Village at Bomlungta next cold weather. No relief can, however, be expected to the labour difficulties from this quarter for some years, even should this experiment prove successful.

Owing to the requirements for rubber cultivation due to the extension of the rubber plantations which now amount to 500 acres the Forest File of 1,117 convicts which was sanctioned in 1910, for general forest work, before an extension of the small rubber plantation was thought of, the labour difficulty has become more acute than ever.

Labour for the rubber plantation has been diverted from urgent forest works in the hope that labour for rubber would soon be forthcoming from the Settlement, and so carry on the experiment until relief came. As, however, from a forest point of view it is more urgent to put the valuable padauk forests in order, than carry on experiments in rubber planting, unless labour for the latter can be provided in addition to the requirements for forest work, I think it is a great mistake to carry on this experiment in planting at the expense of important works of improvement in the forests.

88. The actual cost of extraction of timber to Chatham per ton works out to R18 per ton against R20-13 per ton last year as per detail given :—

Heading of expenditure.		Amount.	Remarks.
		R	
Exploitation	A. I. *a*	1,30,571	Excluding R1,48,749 capital expenditure on new sawmill and launch "Surmai."
Feed and keep of cattle	A. VI. *b*	17,282	
⅛ of store purchased	A. VI. *c*	2,906	
⅛ of buildings	A. VI. *b*	3,451	
⅛ of establishment	B. I and B. II	51,399	
Interest at 3½ per cent. on total value of elephants, *i.e.*, R36,521 on the 30th June 1915.		1,278	
Total expenditure		2,06,887	
Timber extracted in tons (brought to Port Blair).		11,464	
Cost rate per ton		18	

If capital expenditure of R1,48,749 incurred on new sawmill and new launch "Surmai" was to be included the cost rate per ton brought to Port Blair would work out to R31 per ton as against R20-13 in the previous year.

89. The actual cost of fuel extracted for the Settlement works out to R5 per cord against R6-7 per cord in the previous year as per detail given. It is

sold to the Settlement under Government orders at ₹4 per cord resulting in a dead loss to this Department this year of Re. 1 per cord :—

Heading of expenditure.		Amount.	Remarks.
		₹	
Exploitation	A. I. *b*	14,652	Excluding ₹843 spent for charcoal.
¼ of stores purchased	A. VI. *c*	969	
¼ of buildings	A. VII. *b*	1,151	
⅓ of establishment	B. I. and B. II	5,866	
Roads and Bridges	A. VII. *a*	918	
Depreciation 5 per cent. on Locomotive valued ₹7,730 on 30th June 1916.		386	
Depreciation 3 per cent. on tram lines valued at ₹67,064 on 30th June 1916.		2,011	
Interest 3 per cent. on Locomotive valued ₹3,744 on 30th June 1916.		190	
Interest 3 per cent. on tram lines valued ₹65,053 on 30th June 1916.		1,951	
Total expenditure		30,794	
No. of fuel cords extracted		6,082	Excluding 552½ cords of saw-mill firewood.
Cost rate per cord		5	

F. H. CAVENDISH,
Deputy Conservator of Forests,
Andamans.

Dated Port Blair;
The 17th October 1916.

Form No. 7. (Paras. 1 and 2.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Area of Reserved Forests, Protected Forests, Unclassed or Public Forest Land and Leased Forests 1915-16.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1915.		Added during the year.	Excluded or transferred to other heads.	Area on 30th June 1916.		No. and date of Notification of addition or transfer, etc.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
						*Reserved Forests.**					
Andamans.		South Andaman Island (total area of mainland 474 square miles.)	1. Mount Harriett	25,600	40·00	...	...	25,600	40·00		* The so-called reserved forests are under the same legal status as unclassed forests. Their regulation is provided for in section 10, Andaman and Nicobar Manual.
			2. Hope Town	415	0·65	...	...	415	0·65		
			3. Goplakabang	1,965	3·07	...	...	1,965	3·07		
			4. Brigade Creek	2,344	3·66	...	...	2,344	3·66		
			5. Namunaghar	1,275	1·99	...	...	1,275	1·99		
			6. Dbani Khari	8,031	12·55	...	8,031	...	...	Chief Commissioner's notification No. 8, dated 21st July 1915.	
			7. Ali Masjid	14,916	23·30	...	...	14,916	23·30		
			8. Bumlitan	...	...	496	...	496	0·78	Do	
			9. Port Mouat	...	...	6,300	...	6,300	9·84	Do	
				54,546	85·22	6,796	8,031	53,311	83·29		
				Unclassed Forests.							
		Andaman Island.	1. South Andaman	2,19,459	342·91	1,235a	212b	2,20,482	344·51		(a) Transferred from Reserved forests. (b) Transferred to Settlement.
			2. Middle Andaman	3,65,311	570·80	...	...	3,65,311	570·80		
			3. North Andaman	3,17,184	495·60	...	...	3,17,184	495·60		
			4. Baratang group	78,234	122·24	...	...	78,234	122·24		
			5. Ritchies Archipelago	63,874	99·80	...	...	63,874	99·80		
			6. Rutland	30,925	48·32	...	...	30,925	48·32		
			7. The Labyrinth Island.	6,886	10·76	...	...	6,886	10·76		
			8. North Sentinel	14,822	23·16	...	...	14,822	23·16		
			9. South Sentinel	358	0·56	...	...	358	0·56		
			10. Little Andaman	1,90,771	298·08	...	...	1,90,771	298·08		
			11. Other islands	70,510	110·17	...	...	70,510	110·17		
			Grand Total	13,58,334	2,122·40	1,235	212	13,59,357	2,124·00		
				...	2,207·62	...	...	...	2,207·29		

Form No. 8. (Para. 3.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Statement showing the progress made in and the expenditure incurred on Forest Settlements during 1915-16.

Name of Forest Division.	Name of Civil District or Territory.	Area already settled at commencement of the year.	AREAS FINALLY SETTLED DURING THE YEAR.						AREAS UNDERGOING SETTLEMENT.						Remarks.
			Number and date of Government order according final sanction to the Settlement.	Name of Forest settled.	Area in square miles.	Expenditure incurred during the year on areas finally settled.		Entire cost per square mile of area finally settled during the year.	At commencement of the year.		Taken in hand during the year.		Expenditure incurred during the year on areas undergoing Settlement.		
						In Forest accounts.	In other accounts.		Name of tract.	Area in square miles.	Name of tract.	Area in square miles.	In Forest accounts.	In other accounts.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		Sq. Ms.				R	R	R					R	R	
Andamans.	South Andaman Settlement.	85·22	Chief Commissioner's Notification No. 8, dated 21st July 1915.	Port Mouat	9·84										8,031 acres = 12·55 square miles of Dhani Khari reserve disforested during the year, leaving 83·29 miles at the close of the year.
				Bumlitan.	0·78										
					10·62										

Form

FOREST DEPARTMENT,

Record of Demarcation and Maintenance

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at close of the year.	Length of boundaries still to be demarcated at close of the year.
1	2	3	4	5	6
	Miles.	Miles.	Miles.	Miles.	Miles.
Andamans	...	6·39	31·04	37·43	...

N.B.—Boundaries include besides the outer perimeter, the limits of enclosures of private or other lands

Form

Statement of Forest areas surveyed and under

Division.	Area surveyed and under survey during											
	Special surveys—Maps on 2-inch scale or over, by Survey of India Department.						Ordinary, included in topographical Programme of the Survey of India or in District Surveys.					
	With interior details.			Boundary surveys.			With interior details.			Boundary surveys.		
	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Sq. Ms.	Sq. Ms.	R	Sq. Ms.	Sq. Ms.	R	Sq. Ms.	Sq. Ms.	R	Sq. Ms.	Sq. Ms.	R
Andamans	(a) 527	...	59,054	...	...	...	...	...	...	...	...	...

Form

Progress made in

Division.	Areas for which Working-Plans have been sanctioned by Local Government.		Areas for which Working-Plans are being compiled.	
	At commencement of year.	During year.	At commencement of year.	Taken in hand during year.
1	2	3	4	5
	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.
			Reserved Forests.	
Andamans	...	...	...	...
			Unclassed Forests.	
	708	...	...	...

No. 9. (Para. 4.)

INDIA, ANDAMANS.

of Boundaries, 1915-16.

Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.		Remarks.
		On new work.	On repairs.	
7	8	9	10	11
Miles.	Miles.	Rs.	Rs.	
77·48	114·91	...	29	Length reduced owing to exclusion of 1,235 acres of reserved forests during the year (*vide* Form No. 7).

within the forests, but not the limits of sub-divisions, such as compartments and coupes, etc.

No. 10. (Paras. 5 to 8.)

survey during the year 1915-16.

The year 1915-1916.													
Chain and compass or other surveys by local officers.								Areas remaining to be taken under Survey.	Total Forest area at end of the year, as per Form No. 7.	Cost.			Remarks.
With interior details.					Boundary surveys.								
4-inch or over.		Under 4-inch.		Total Cost.	Previous.	Of year.	Total.			Previous.	Of year.	Entire cost of all Surveys at end of the year.	
Previous.	Of year.	Previous.	Of year.										
14	15	16	17	18	19	20	21	22	23	24	25	26	27
Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq. Ms.	R	Sq. Ms.	Sq. Ms.	R	Sq. Ms.	Sq. Ms.	R	R	R	
...	...	...	...	...	...	2 5	34	(b) 496	2,207	59,054	(c) 1,049	60,137	(a) 447 square miles in the Middle Andaman and 80 square miles in Baratang group. (b) Forest survey on 2″ scale now required for North Andaman 496 square miles. (c) Expenditure incurred in connection with Middle Andaman Survey as per Comptroller, India, Treasuries' Objection Statement.

No. 11. (Paras. 9 to 14.)

Working-Plans, 1915-16.

Areas for which Working-Plans have still to be taken in hand.	Areas for which Working-Plans are not at present required.	Total Forest area, as in Form No. 7.	Entire cost per square mile of Working-Plans completed.	Remarks.
6	7	8	9	10
Sq. Ms.	Sq. Ms.	Sq. Ms.	R	
83·29	...	83·29	...	
...	1,416	21,24·00	R72 6 0	

(Paras. 15 to 23.)

Form No. 12.

FOREST DEPARTMENT INDIA, ANDAMANS.

Communications and Buildings, 1915-16.

Division.	NEW WORK UNDERTAKEN DURING THE YEAR.						REPAIRS EXECUTED DURNG THE YEAR.						Remarks.
	Buildings.		Roads and Paths.			Other works. Total expended on new work.	Buildings.		Roads and Paths.			Other works. Total expended on repairs.	
	Description of building.	Expenditure incurred.	Description of road or path.	Length of road or path.	Expenditure incurred.		Description of building.	Expenditure incurred.	Description of road or path.	Length repaired.	Expenditure incurred.		
1	2	3	4	5	6	7 8	9	10	11	12	13	14 15	16
		R		Miles.	R	R R		R		Miles.	R	R R	
Andamans.	Deputy Ranger's quarters at Garacherma	844	...	...	...	314(a) 1,158	Subordinates quarters at Haddo	9	Steam Tram line	6	604	116 729	(a) With the exception of this amount all expenditure incurred on road alignment in Middle Andaman has been charged to extraction (A.I.a).
	Rest house at Bomlunta	531	...	...	...	... 531	Sawmill Engineer's quarters at Chatham	336	,,	...	...	... 336	
	Assistant Forest officers' quarters at Rangat	2	...	...	...	... 2							
	Subordinate quarters at Sinkan	5	...	...	...	... 5	Store Keepers' quarters at Chatham	31	,,	...	...	... 31	
	Work shops at Chatham	63	...	...	...	... 63	Convict barrack No. 4 at Wimberleygunge	2	,,	...	...	... 2	
	Timber shed at Chatham	32	...	...	...	... 32							
	Tool godown at Sinkan	3	...	...	...	... 3							
	Convict barracks at Haddo	2,744	...	...	...	... 2,744							
	Total	4,224	...	...	...	314 4,538		378		...	604	116 1,098	

Form No. 13.

(Paras. 24 and 25.)

Register of breaches of Forest Rules during 1915-16.

Forest Division.	Cases pending from previous year.	New Cases of the Year.					Total Cases.	Disposed of during the year.						Cases pending at close of year.
								Convictions.		Acquittals.		Total.		
		Injury to forest by fire.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new Cases of the year.		Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Andamans A.	...	...	20	...	...	20	20	19	(a) 27	1	1	20	28	(a) One accused acquitted.
Grand Total A.	...	...	20	...	...	20	20	19	27	1	1	20	28	The Indian Forest Act not in force in the Andamans.
B.	...	...	...	...	...	...	...	..	...	...	...	...	...	
C.	...	...	...		...	...	...	...	...	...	...	...	...	

N.B. – A. means cases taken into Court.
B. means cases disposed of under section 67 of Indian Forest Act, 1878.
C. means undetected cases.

Form No. 16.

(Paras. 26 to 32.)

Area closed and open to Grazing during 1915-16.

Division.	Area in square miles.						Remarks.
	Closed to all animals.		Closed only to browsers (camels, goats or sheep).		Open to all animals.	Total area.	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year		
1	2	3	4	5	6	7	8
			Reserved Forests.				
Andamans	83·29	...	...	...	...	83·29	
			Unclassed Forests.				
		...	...	...	344·51 (a)	344·51	(a) Area of unclassed forests in the South Andaman Settlement. No grazing or fodder grass available.

N.B.—Entries in columns 4 and 5 should not include areas already entered in columns 2 and 3. Column 7 should be the total of columns 2, 3, 4, 5 and 6.

Form No. 18.

(Paras. 33 to 55.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Artificial reproduction for the forest year 1915-16.

Division.	Kind of Plantation.	Area in acres.				Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
		On 1st July 1915.	Added during the year.	Excluded during the year.	Area on 30th June 1916.	Creation.	Upkeep.	Creation.	Upkeep.			
1	2	3	4	5	6	7	8	9	10	11	12	13
						R	R	R	R	R	R	
	Regular.											
Andamans.	Padauk (Goplakabang) 1883	4	...	1(*a*)	3	...	1	Not known		...	...	
	„ „ 1884	5	...	1(*a*)	4	...	1	do.		...	...	(*a*) Recomputation.
	„ „ 1885	10	...	1½(*a*)	8½	...	3	do.		...	...	
	„ „ 1886	20	...	10(*a*)	10	...	4	do.		...	...	
	Teak and Padauk 1887	16	...	4(*a*)	12	...	4	558	Not known	...	...	
	„ „ „ 1889	22	...	7(*a*)	15	...	5	1177	...	...	...	
	„ „ „ 1890	45	...	...	45	...	...	1,096	...	...	...	
	„ (Ali Musjid) 1892	320	...	...	320	...	...	3,003	...	...	...	
	„ „ „ 1893	550	...	...	550	...	...	2,745	...	...	...	
	„ „ „ 1894	400	...	...	400	...	...	1,524	...	...	...	
	Mangrove (Namunaghar) 1897	442	...	...	442	...	...	1,906	916	...	...	
	„ (Dhani Khari) 1899	243	...	...	243	...	...	1,975	475	...	...	
	Pararubber (Namunaghar) 1881	1/6	...	...	1/6	...	...	18	111	...	...	
	„ (Goplakabang) 1906-15	335	165	...	500	4,579	5,649	28,051	18,923	...	...	
	Afzalia and Mahogany 1907	8	...	...	8	...	4	79	201	...	...	
	Eucalyptus . . 1913	5½	...	3(*a*)	2½	...	...	302	...	...	...	
	Total regular plantation	2,426⅔	165	27½	2,563⅛	4,579	5,674	...	...	...	...	
	Cultural operations.											
	Padauk area . 1903 to 1911	1,278	25(*a*)	...	1,303	...	457	17,918	15,458	...	...	
	Clear felled broadcast (Goplakabang) sowing 1912	20	...	...	20	...	37	138	418	...	...	
	Rutland, partial clearing with sowing	35	...	...	35	...	...	167	48	...	...	
	Teak and Padauk (Goplakabang) 1913	33½	1½	...	35	...	75	559	647	...	...	
	Teak with exotics „ 1913	52	3	...	55	...	74	460	390	...	...	
	Teak and Padauk „ 1914	80	8	...	88	...	216	1,365	851	...	...	
	Albizzia moluccana „ 1915	32	2	...	34	33	231	70	238	...	...	
	„ and Eucalyptus 1914	15	...	15(*b*)	...	...	3	154	23	...	...	(*b*) Written off.
	„ „ „ 1915	38	...	3(*a*)	35	70	215	472	221	...	...	
	Cultural operation, Long Island	10	...	...	10	...	8	174	8	...	...	
	„ „ Bajalunta	5	...	...	5	...	...	22	...	...	...	
	Teak and Padauk 1916	...	200	...	200	2,822	...	2,822	...	...	...	
	Sample plot at Gobang . .	...	...	...	...	48	...	...	...	...	...	
	Survey of plantation . .	...	...	...	...	...	55	...	...	...	...	
	Collection of seed, various .	...	...	...	...	235	...	...	...	...	...	
	Total cultural operations	1,598½	239½	18	1,820	3,208	1,371	...	...	...	...	
						14,832						

NOTE—Upkeep includes cleanings, weedings, thinnings, filling up blanks, etc. Cultural operations are defined in the memorandum appended to Circular No. 10-F., dated the 5th August 1904.

Form

FOREST DEPARTMENT

Outturn (in cubic feet, solid) of Timber and Fuel

Division.	Timber in the rough, Logs.					Timber in the rough, Poles.					Sawn or square Timber.				
	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
I.—Reserved															
	42,043	...	...	...	42,043	84,065	50	(a) 12,825	...	96,940	...	...	...	...	...
II.—Protected															
	Nil.														
III.—Unclassed State															
	4,54,868	...	...	...	4,54,868	349	132	(a) 12,825	32,006	45,312	(c) 1,76,374	37,506	...	...	2,13,880
IV.—Lease															
	Nil.														
GRAND TOTAL	4,96,911	...	...	...	4,96,911	84,414	182	25,650	32,006	1,42,252	1,76,374	37,506	...	...	2,13,880

No. 19. (Paras. 56 to 73.)

INDIA, ANDAMANS.

during the year 1915-16 and Agency of Exploitation.

Miscellaneous.					Total Timber.					Fuel.					Total Outturn.	Remarks.
Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.		
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
Forests.																
...	...	...	...	...	1,26,108	50	(a) 12,825	...	1,38,983	5,52,877	...	(b) 1,02,600	19,920	6,75,397	8,14,380	(a) An estimate based on number of free grantees huts. 10 bullies=5 c. ft. 2 posts =10 ,, are allowed for each hut.
Forests.																(b) There are 1,710 house holders and quantity of fuel removed per house is estimated at 1½ cord. 1 cord=80 c.ft. solid.
Forests.																
...	616	...	...	616	6,31,591	38,254	(a) 12,825	32,006	7,14,676	(d) 1,38,989	25,440	(b) 1,02,600	99,440	3,66,469	10,81,145	(c) Logs squared with axe.
Forests.																(d) Including charcoal 1 md.=8 c. ft. solid. Fuel 1 cord=88 c. ft. solid.
...	616	...	...	616	7,57,699	38,304	25,650	32,006	8,53,659	6,91,866	25,440	2,05,200	1,19,360	10,41,866	18,95,525	

Annual Form No. 20. (Paras. 56 to 73.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Outturn of Minor Forest Produce during the year 1915-16.

Description of produce.	PRODUCE REMOVED OR UTILIZED.										Remarks.
	By Government Agency.		By Purchasers.		By Free Grantees.		District Officers.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		R		R		R		R		R	
	I.—Reserved Forests.										
Bamboos . . No.	1,10,686	69	32,175	20	1,71,000	107	...	...	3,13,861	196	The columns 6 and 7 are estimated based upon the following data :—
Canes . . . „	3,51,115	220	3,875	6	34,200	21	...	...	3,89,190	247	There are 1,710 self-supporters and free resident houses, each of which is allowed—
Thatching leaves Bdles.	...	...	2,501	156	17,100	1,069	...	...	19,601	1,225	200 Bamboos. 40 Canes and 20 Bundles Thatching leaves annually.
Pan leaves . Cooly load	...	...	9	1	...	...	...	...	9	1	All other figures are actuals.
Total .	...	289	...	183	...	1,197	...	...	...	1,669	
	II.—Protected Forests.										
	Nil										
	III.—Unclassed State Forests.										
Bamboos . . No.	14,320	9	34,375	21	1,71,000	107	3,43,413	215	5,63,108	352	
Canes . . . „	49,131	31	1,600	1	34,200	21	19,786	12	1,04,717	65	
Thatching leaves .Bdles.	602	38	1,566	98	17,100	1,069	2,269	142	21,537	1,347	
Pan leaves . Cooly load	...	...	16	1	...	...	...	...	16	1	
Total .	...	78	...	121	...	1,197	...	369	...	1,765	
	IV.—Leased Forests.										
	Nil										
Total .	...	...	...	...	...	...	...	....	...	...	
GRAND TOTAL .	....	367	....	304	...	2,394	...	369	...	3,434	

In the "Remarks" column of this form it should be shown which of the figures entered in it are *actuals* and which are only *estimates*, it being also noted in the latter case how the figures have been arrived at.

Form No. 21. (Para. 97.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts sold locally, or otherwise disposed of, during the year 1915-16.

Name of Division.	Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forests and sale depôts.
1	2	3	4	5	6
			TIMBER—(cubic feet).		
			Padauk.		
	47,272	4,10,058	4,57,330	3,07,488	1,49,842
			Koko.		
	4,434	41,720	46,154	28,846	17,308
			Black Chuglam.		
	253	8,512	8,765	5,187	3,578
			Marblewood.		
	...	465	465	335	130
			Satinwood.		
Andamans	...	36	36	8	28
			Pyinma.		
	27,457	68,199	95,656	81,477	14,179
			Gurjan.		
	26,365	56,606	82,971	75,255	7,716
			Other Logs.		
	16,540	1,02,210	1,18,750	99,719	19,031
			Poles and Bullies.		
	580	84,414	84,994	84,594	400
Total timber	1,22,901	7,72,220	8,95,121	6,82,909	2,12,212
			FUEL—(cubic feet solid).		
			Firewood.		
	61,754	8,17,718	8,79,472	8,72,080	7,392
			Charcoal.		
	34	56,396	56,430	46,677	9,753
	61,788	8,74,114	9,35,902	9,18,757	17,145
			Minor produce.		
	R 458	R 8,921	R 9,379	R 9,261	R 118

Form No. 22. (Para. 77.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Abstract showing the Value of Timber and other Produce at sale Depôts for the year 1915-16.

Description of Timber and other produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.		Remarks.
	No.	C. ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
Timber.			R			R	R	R	
Logs	1,409	65,589	66,022	3,514	1,30,917	1,56,165	90,143	...	
Scantlings	75,498	47,458	63,703	74,204	45,246	74,757	11,054	...	
Total	76,907	1,13,047	1,29,725	77,718	1,76,163	2,30,922	1,01,197	...	
Fuel.									
Firewood c. ft. solid	...	61,226	2,783	...	176	8	...	2,775	1 cord=88 c. ft. solid.
Charcoal „ „	...	34	3	...	2,400	188	185	...	1 md.=8 c. ft. solid.
Total	...	61,260	2,786	...	2,576	196	185	2,775	
Grand Total	...	...	1,32,511	...	...	2,31,118	1,01,382	2,775	

Net difference in favour of the year R98,607.

Form No. 23. (Para. 78.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Abstract showing the Value of Live and Dead Stock for the year 1915-16.

Description of Live and Dead Stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in Value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
		R		R	R	R	
Live Stock.							
Elephants	39	40,070	39	36,063	...	4,007	Depreciation 10 per cent. six elephants and one calf purchased for R15,500 during the year not included as they have not arrived as yet.
„ Calves	2	416	8	458	42	...	Addition 10 per cent.
Buffaloes	7	294	20	783	489	...	Depreciation 10 per cent. 14 Buffaloes purchased for R525 during the year and one died valued R7.
Total	48	40,780	61	37,304	531	4,007	
Dead Stock.							
Steam Vessels.							
Steam Vessel "Rosamond"		1,18,000	1	1,12,100	...	5,900	Depreciation 5 per cent.
„ Launch "Eileen"		6,386	1	15,632	9,246	...	„ „ cost of new boiler and reconstruction added.
„ Cutter "May"	1	3,656	1	3,473	...	183	Depreciation 5 per cent.
„ „ "Dorothy"	1	2,129	1	2,023	...	106	„ „
Oil motor "Ruby"	1	253	1	240	...	13	„ „
Boats and Lighters.							
Lighters	2	1,179	2	1,120	...	59	Depeciation 5 per cent.
Boats, timber towing	18	8,095	18	8,103	8	...	„ „ one received by conversion from House boat and one condemned.
„ House	1	835	...	...	...	835	Depreciation 5 per cent. converted into timber boat.
„ Officers, rowing	2	415	2	394	...	21	„ „
„ Jolly	4	744	4	707	...	37	„ „
„ Rowing, 10 Oars	1	289	1	275	...	14	„ „
„ Life	1	1,186	1	1,127	...	59	„ „
„ Water	1	671	1	637	...	34	„ „
Dingies Bengal	8	554	9	588	34	...	„ „
„ Burmese	2	96	2	87	...	9	„ „
Plant and Machinery.							
Sawmill	...	14,551	...	13,006	...	1,545	Depreciation 10 per cent.
Crane	1	132	1	125	...	7	„ 5 „
Portable tramway	25¾ miles 1 locomotive 7 trucks 5 trollies.	54,440	25¾ miles 1 locomotive 73 trucks 5 trolies.	48,996	...	5,444	„ 10 „
Carts, small	3	93	2	66	...	27	Depreciation 10 per cent.
Buildings (wooden)	...	8,434	...	7,591	...	843	„ „
Mathematical instruments	...	7,738	...	7,418	...	320	„ 5 per cent.
Furniture	...	638	...	661	23	...	„ 10 „
Stores (marine and miscellaneous).	...	19,721	...	26,580	6,859	...	„ 10 „
							Difference in valuation at commencement and end.
							R
							For . . . 16,701
							Against . . . 19,463
Total	...	2,50,235	...	2,50,949	16,170	15,456	Against . . . 2,762
Grand Total	...	2,91,015	...	2,88,253	16,701	19,463	

Annual Form No. 24. (Para. 74.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Revenue of the different Divisions during 1915-16.

REVENUE.

	Rs.	A.	P.
I.—Timber and other produce removed from the forests by Government Agency—			
a. Timber	4,21,165	0	0
b. Firewood and charcoal	31,311	0	0
c. Bamboos	143	0	0
d. Sandal-wood	...		
e. Grass and other minor produce	3,842	0	0
Total I	4,56,461	0	0
II.—Timber and other produce removed from the forests by consumers or purchasers—			
a. Timber	5,845	0	0
b. Firewood and charcoal	161	0	0
c. Bamboos	41	0	0
d. Grazing and fodder Grass	...		
e. Other minor produce	263	0	0
f. Other items	...		
g. Commutation fees	...		
Total II	6,310	0	0
III.—Drift and waif wood and confiscated forest produce	...		
Total III	...		
IV.—Revenue from forests not managed by Government—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forests	...		
Total IV	...		
V.—Miscellaneous—			
a. Fines and forfeitures	...		
b. Refunds	45	0	0
c. Other sources	516	0	0
Total V	561	0	0
Grand Total Revenue	4,63,332	0	0

Form No. 24.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Expenditure of different Divisions during 1915-16.

EXPENDITURE.

A.—CONSERVANCY AND WORKS.

	Rs.	A.	P.
I.—Timber and other produce removed from the forests by Government Agency—			
a. Timber	2,79,320	0	0
b. Firewood and charcoal	15,495	0	0
c. Bamboos	23	0	0
d. Sandal-wood	...		
e. Grass and other minor produce	2,440	0	0
Total A. I	2,97,278	0	0
II.—Timber and other produce removed from the forests by consumers or purchasers	207	0	0
Total A. II	207	0	0
III.—Drift and waif wood and confiscated forest produce	...		
Total A. III	...		
IV.—Revenue from forests not managed by Government—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forests	...		
Total A. IV	...		
V.—Rent of leased forests and payments to Shareholders in Forests managed by Government	...		
Total A. V	...		
VI.—Live-Stock, Stores, Tools and Plant—			
a. Purchase of cattle	16,036	0	0
b. Feed and keep of cattle	17,282	0	0
c. Purchase of stores, tools and plant	3,875	0	0
Total A. VI	37,193	0	0
VII.—Communications and Buildings—			
a. Roads and bridges	918	0	0
b. Buildings	4,602	0	0
c. Other works	116	0	0
Total A. VII	5,636	0	0
VIII.—Organization, improvement and extension of Forests—			
a. Demarcation	29	0	0
b. Cost of Forest Settlements; compensation for land and rights	...		
c. Surveys	1,083	0	0
d. Working-Plans	...		
e. Sowing and planting	14,832	0	0
f. Protection from fire	...		
g. Other works	228	0	0
Total A. VIII	16,172	0	0
IX.—Miscellaneous—			
a. Law charges	...		
b. Other charges	2,203	0	0
Total A. IX	2,203	0	0
Carried over Total A.—Conservancy and Works	3,58,689	0	0

Annual Form No. 24.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Expenditure of the different Divisions during 1915-16.

	Rs.	A.	P.
BROUGHT FORWARD, TOTAL A.—CONSERVANCY AND WORKS	3,58,689	0	0
B.—ESTABLISHMENTS.			
I.—SALARIES—			
a. Conservators	...		
b. Superior officers	35,555	0	0
c. Subordinate forest and depôt establishments	10,695	0	0
d. Office establishments	7,628	0	0
e. Deputation and special allowances	7,526	0	0
f. Exchange compensation allowance	...		
TOTAL B. I	61,404	0	0
II—TRAVELLING ALLOWANCES—			
a. Conservators	...		
b Superior officers	5,439	0	0
c. Subordinate forest and depôt establishments	1,672	0	0
d. Office establishments	17	0	0
TOTAL B. II	7,128	0	0
III—CONTINGENCIES—			
a. Stationery	18	0	0
b. Carriage of tents and records	...		
c. Rents, rates and taxes	...		
d. Pay of police guards	...		
e. Official postage	376	0	0
f. Sundries	657	0	0
TOTAL B. III	1,051	0	0
TOTAL B—ESTABLISHMENTS	69,549	0	0
GRAND TOTAL OF EXPENDITURE	4,28,238	0	0
SURPLUS	35,094	0	0

Form No. 25. (Para. 74.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Account Current for the year 1915-16.

DR.			CR.		
	₹ a. p.	₹ a. p.		₹ a. p.	₹ a. p.
To Cash Balance . .	...	...	*I.—Refunds and Drawbacks—*		
			By Expenditure as per annual summary, Form No. 24 . . .	...	4,28,204 14 8
					+33 8 0
VIII.—Assessed Taxes—			„ Deposits . . .	...	...
To Income tax—Deductions from salaries .	...	1,228 1 8	„ General Provident Fund.	...	930 7 9
„ Revenue as per annual summary, Form No. 24	...	4,63,332 9 10			
„ Service Funds . .	...	...	*Forest Cash Remittances, Local—*		
„ Bengal and Madras Family Pension Funds.	...	403 7 0			
„ Deposits . . .	...	...	By Remittances to treasuries	...	2,93,490 9 3
„ Forest officers Provident Fund . . .	...	575 0 0	„ Inter-divisional transfers	...	80 0 0
„ General Provident Fund	...	4,916 12 0	„ Unpaid cheques written back	...	3,250 0 0
			„ Forest advances . .	...	46,620 11 10
Special Account—			„ Suspense Account .	...	127 8 0
			„ Account current (other Governments) . .	...	...
To General Family Pension Fund	...	486 0 0			
Forest Cash Remittances, Local—			*Accounts between India and Burma—*		
To Forest cheques drawn.	...	1,19,152 7 11			
„ Inter-divisional transfers	...	933 13 6	III—Items adjustable by India	...	8,247 13 2
„ Forest advances . .	...	45,101 14 6	IV—Items adjustable by Burma . . .	...	118 5 8
„ Suspense account .	...	565 4 5	By Inter-Departmental transfers . . .	...	...
„ Motor car advances .	...	350 0 0			
„ Account Current (other Governments) . .	...	...	*Accounts between India and Assam—*		
			IV—Items adjustable by Assam . . .	...	251 14 6
Accounts between India and Burma—					
III—Items adjustable by India . . .	...	1,33,066 8 5	*Accounts between India and Bihar and Orissa—*		
			IV—Items adjustable by Bihar and Orissa .	...	1,735 14 6
Accounts between India and Bengal—					
III—Items adjustable by India . . .	...	1,007 14 5	*Accounts between India and Bengal—*		
IV—Items adjustable by Bengal . . .	...	148 6 10			
			IV—Items adjustable by Bengal . . .	...	70,577 1 11
Inter-Departmental Transfers—					
Military Supply Department . . .	...	75 1 2			
Telegraph Department .	...	130 0 0	*Inter-Departmental transfers—*		
Post Office „ .	...	662 9 0			
Marine „ .	...	18,352 14 3 *33 8 0	Marine Department . .	...	26,323 3 0
Civil „ .	...	1,65,245 9 11	Civil Department . .	...	75,647 6 8
			Cash balance . . .	...	128 7 11
TOTAL .	...	9,55,734 6 10 +33 8 0	TOTAL .	...	9,55,734 6 10 +33 8 0

* *Vide* C. I. T.'s No. $\frac{\text{G. H. M.}}{191}$, dated 4th September 1916.

Annual Form No. 26. (Paras. 74 and 75.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Revenue received and Outstandings on account of Revenue during 1915-16.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to Department at end of year.	Remarks.
1	2	3	4	5	6	7	8
		₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	
Andamans	Revenue from timber and other produce removed by Government Agency.	64,101 1 6	4,88,639 2 6	5,52,740 4 0	4,60,496 9 6	92,243 10 6	Approved firms pay at 90 days sight shipping documents.
	Revenue from timber and other produce removed by Purchasers.	.....	6,311 0 3	6,311 0 3	6,311 0 3	.....	
	Other revenue	.....	748 4 6	748 4 6	477 2 6	271 2 0	
	Total	64,101 1 6	4,95,698 7 3	5,59,799 8 9	4,67,284 12 3	92,514 12 6	

Annual Form No. 27. (Para. 76.)

Outstandings and Liabilities on account of Contractors and Disbursers for 1915-16.

Division.	Department Debtor.			Department Creditor.			Balance Due.	
	Opening balance.	Recoveries in cash and value of supplies and work done during the year.	Total.	Opening balance.	Payments made during year.	Total.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.
Andamans	...	45,101 14 6	45,101 14 6	76 15 8	46,620 11 10	46,697 11 6	1,595 13 0	(a)
Total	...	45,101 14 6	45,101 14 6	76 15 8	46,620 11 10	46,697 11 6	1,595 13 0	.....

(a) As per ledger abstract R1,592-10-9. The difference of R3-2-3 represents amount recovered from Mr. W. H. Miller and remitted to Treasury in the account for May 1916, but not shown as creditable to Forest advances. The amount will be adjusted in the account for July 1916.

Appendix I.

Descriptive roll of Elephants in the Andamans Forest Division on the 30th June 1916.

Serial No.	Name of Elephants.	Sex.	Height.		Date of receipt.	Estimated age on 31st March 1892, or on date of arrival if arrived later.	Present age.	Number of years elephant has been working.	Conditions.	No. of days			Cost price.	Remarks.
			Feet.	Inches.						At work.	At rest.	Sick.		
1	2	3	4		5	6	7	8	9	10			11	12
								Y. M.						
1	Arnold (Tusker)	Male	8	8	Before July 1891.*	41	65	25 0	Fair	295	71	...	...	
2	Goolabi	Female	7	9	March 1895	40	61	21 0	"	117	103	146	2,605	
3	Viper	"	7	10½	Before March 1886.*	36	60	30 0	"	90	57	121	...	Let loose for three months.
4	Bhokaung (Tusker).	Male	8	4½	March 1894	36	58	22 0	Good	189	72	105	4,088	
5	Hannah	Female	7	6	Before July 1891.*	33	57	Over 24 0	"	145	153	68	...	
6	Wellington (Tusker).	Male	8	3½	March 1895	35	56	21 0	Fair	227	68	71	3,855	
7	Sahpah (Tusker)	"	8	4	March 1894	33	55	22 0	Good	259	76	31	3,538	
8	Mahpah	Female	8	0	March 1894	33	55	22 0	Fair	205	59	102	2,813	
9	Pagi	"	7	9	March 1894	32	54	22 0	Good	265	83	18	2,713	
10	Bhairon Pershad (Tusker).	Male	8	4	December 1895.	32	53	Over 20 6	Fair	175	63	128	3,488	
11	Australia	Female	7	7½	Before March 1886.*	28	52	30 0	"	265	101	...	...	
12	Jangipur	"	7	10½	April 1891*	28	52	25 0	Poor	12	10	101	3,025	Let loose since November 1915.
13	Paul (Tusker)	Male	8	9	March 1895	30	51	21 0	Good	277	86	3	3,763	
14	Bahram (Tusker)	"	8	7	December 1895.	28	49	20 6	"	203	76	87	3,355	
15	Mipu	Female	7	1	21st February 1907.	40	49	9 5	Poor	65	24	125	4,972	Let loose for 5 months.
16	Adolphus (Tusker)	Male	7	11	Before March 1886.*	23	47	Over 30 0	Good	274	66	26	...	Old and blind.
17	Lily	Female	8	2	11th February 1902.	30	44	14 4	"	236	66	64	4,523	
18	Bholanath (Tusker).	Male	8	7	28th February 1903.	30	43	13 5	"	209	71	86	5,914	
19	Lachmi Pershad (Tusker).	"	9	4	28th February 1903.	30	43	13 5	"	...	13	353	6,415	Unfit for dragging.
20	Aurangabad	Female	7	8	May 1892	17	41	23 0	"	280	82	4	2,530	
21	Meerut	"	8	4	11th February 1902.	27	41	14 4	"	254	64	48	4,523	
22	Sangeswar Pershed (Tusker).	Male	8	9	3rd January 1905.	30	41	11 6	Fair	195	50	121	6,464	
23	Gulbadan	Female	7	10	11th February 1902.	26	40	14 4	Good	260	87	19	4,523	In calf. See below.
24	Delhi	"	7	10	11th February 1902.	26	40	14 4	"	248	87	31	4,523	
25	Moti Mala	"	7	10	11th February 1902.	25	39	14 4	"	284	75	7	4,523	
26	Gopal Das (Tusker).	Male	9	2	28th January 1903.	25	38	13 5	"	241	125	...	6,215	
27	Sunder Pershad (Tusker).	"	9	2	28th January 1903.	25	38	13 5	"	289	73	4	5,915	
28	Pawan Peyari	Female	7	6	25th May 1911.	32	37	5 1	"	268	96	2	5,543	
29	Ganga Pershad (Tusker).	Male	8	7	3rd January 1905.	25	36	11 6	"	293	58	15	6,464	
30	Amir (Tusker)	"	8	4	28th January 1903.	23	36	13 5	"	160	57	149	5,915	
31	Sunder Malla	Female	7	3	25th May 1911.	30	35	5 1	"	214	78	74	4,893	
32	Madho	"	7	10	26th April 1906.	23	33	10 2	"	276	90	...	6,312	
33	Bateswar	"	7	0	25th May 1911.	30	35	5 1	"	226	84	56	5,093	
34	Maxi	"	7	8	Born in January 1886.	6	30	14 0	"	285	81	...	...	
35	Lachmania	"	7	2	5th May 1911.	22	27	5 1	"	249	67	50	4,693	
36	Megmala	"	6	8	25th May 1911.	20	25	5 1	"	111	123	132	4,392	
37	Sudhamani	"	7	0	22nd June 1911.	14	19	15 0	"	263	97	6	3,250	
38	Chester Bahadur	Male	8	5½	Born in August 1897.	...	19	... ...	"	248	118	...	...	
39	Schlich Bahadur	"	7	8½	Born in January 1900.	...	17	... ...	"	69	31	266	...	
40	Jai Moti	Female	5	7	25th May 1911.	2½	7½	... ...	"	...	366	...	375	Calf of Dharam Piyari.
41	Nur Jahan	"	4	7	Born in March 1914.	...	2	... ...	"	...	366	...	...	Calf of Gulbadan.

* Estimated age on 31st March 1892.

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
8, HASTINGS STREET

N 43024

REPORT

ON

FOREST ADMINISTRATION

IN THE

ANDAMANS

FOR THE YEAR

1917-18

BY

F. H. CAVENDISH

Deputy Conservator of Forests

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1919

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Paragraph 19.-In line 3 after the word"report" please insert"of which 1791 cords were sold at Rs.4 per cord and 3112 cords" and delete the words"and sold" from the same line.

In the 5th line please substitute Rs.10,380 for Rs. 15,935.

V 430.24
1

REPORT

ON

FOREST ADMINISTRATION

IN THE

ANDAMANS

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BY

F. H. CAVENDISH
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CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1919

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No. 126, dated Simla, the 20th February 1919.

From—A. E. GILLIAT, Esq., I.C.S., Under-Secretary to the Government of India,
Department of Revenue and Agriculture,

To—The Superintendent of Port Blair.

I am directed to acknowledge the receipt of your letter No. 2489, dated the 11th November 1918, with which was submitted the Annual Report on Forest Administration in the Andamans for the year 1917-18.

2. The Government of India have read the report with interest and are pleased to note the satisfactory results of the year's work as evidenced by the increased outturn, the decreased cost of conversion in the mill, the efforts made to meet sylvicultural requirements and the exceptionally good financial results. Mr. Cavendish and the officers working under him are to be congratulated on the results attained in face of the chronic shortage of labour.

320RAD—235—6-3 19—GOPBS

File No. 288
of 1918.

No. 2489, dated Port Blair, the 11th November 1918. Serial No. 1

From—Lieut.-Colonel M. W. Douglas, C.I.E., I.A., Superintendent of Port Blair,

To—The Secretary to the Government of India, Department of Revenue and Agriculture.

I have the honour to forward the Annual Report of the Forest Department of the Andamans for the year 1917-18, prepared by the Deputy Conservator of Forests, together with forms and appendices.

2. There was a reduction in fuel supplied to the Settlement from 7,431 to 6,879½ cords supplied during the current year. Of the latter amount 1,750½ cords were issued from Chatham wastage. The Deputy Conservator of Forests estimates that the Department lost Rs. 15,935 owing to the reduction in demand by the Settlement. The question was referred to in paragraph 3 of my letter (No. 2594, * dated 9th November 1917) forwarding the report of last year, and there seems to be no necessity for alteration in the existing rates, which are Rs. 4-12-0 per cord for fuel extracted, Rs. 5-12-0 for sawmill waste. The cost of extraction is based on theoretical figures, which cannot be regarded as accurate in their application ; while the demand by the Settlement is affected by various factors which must cause fluctuations from year to year.

Paragraphs 19 and 61.

*A. Pros., June 1918. Nos. 6—9 (*F. 268 of 1917.*)

3. The rubber plantations are still in the temporary charge of the Forest Department, and with the exception that the tea plantation will be interplanted with rubber, further extensions are not proposed.

Paragraph 39.

Mr. Long Price, an expert rubber planter from Ceylon, gave the administration the benefit of his advice when passing through Port Blair on the occasion of a visit to the Nicobars. He asked to be shown the plantations, and in the course of the visit kindly offered to give me his views in writing.

At that time the officer in charge had recently arrived ; he had no knowledge of rubber culture, and some deterioration had set in owing to his applying the same principles to the cleaning of rubber as are in force for teak plantations. No attempt is made in the absence of expert control to maintain the plantations at the standards adopted elsewhere. All that has been desired is to keep them drained and reasonably clean ; and this standard has, as a rule, been reached without difficulty.

Mr. Dalton, the officer in charge, as a result of Mr. Long Price's advice, has subsequently done admirable drainage work. The men supplied to him are sufficient, if he obtains a reasonable task from them and fully up to the scale adopted in Mergui, Burma.

Rubber plantations are obviously profitable, and supply a suitable form of concentrated labour for convicts for whom hard labour within Settlement limits is prescribed. A scheme is under consideration for the collection of these advanced and habitual criminals in enclosures in the Wimberleygunj valley, in connection with which the cultivation of these plantations will be a valuable asset.

4. There has been a considerable rise of 2,289 tons of timber exported, with a corresponding increase of revenue from Rs. 6,45,195 to Rs. 9,73,788.

Paragraphs 60 and 87.

This increase is partly due to specially high prices, and also to the demand for second class timbers. The prices were affected by the low rates of freight charged during the year, as compared with those prevailing between Calcutta and Rangoon, and which, owing to lack of shipping, were almost prohibitive. The steamer "Maharaja" was impressed by Government at the expense of the Settlement; but the question of the revision of freight rates was not considered until after the conclusion of the year under report ; and freights were charged to buyers of timber at pre-war rates — at Rs. 12-8-0 per ton, as compared with ruling rates of Rs. 52 per ton. These conditions naturally enabled them to tender at specially high rates.

5. The proposal to connect the machinery of the old sawmill with that of the new mill constitutes a valuable improvement, which, it is hoped, may be carried out during the current year ; as also the provision of suitable means of rapidly seasoning timber. At present the Settlement is supplied with green timber for buildings which often deteriorates rapidly.

Paragraph 92.

6. The usual complaints are made of shortage of labour, though these are not confined to the Forest Department.

Paragraph 60.

The declared policy of the Government of India is that the profitable employment of convicts and the development of the resources of the islands must be subordinated to interests of discipline and reform. It follows therefore that selection has to be made in the case of convicts drafted to forest labour gangs, some sixty miles from the Settlement. It is unfortunate that additional men could not be supplied for munition work in excess of the ordinary strength. The alternative lay, if necessary, in giving the "Munition's orders" priority to the demands of the Calcutta market.

Paragraph 94.

Seeing, however, that the daily average for the past year amounted to 1,241 men and constituted the highest reached previously, and that for the year under report was 1,216 men, the grounds for complaint would seem to be slight.

Paragraph 94.

The attraction of self-supporting convicts to forest camps proceeds, and seems likely to meet with some success in view of the favourable terms offered. Forest life is naturally detested by ordinary Indian convicts; but many Burmans find it congenial and it is from this race that self-supporters are likely to be procured.

Paragraph 95.

7. In spite of the artificial prices, due to war rates and exceptional freights, the results of the year are satisfactory in all respects, more especially the increasing popularity of second class timbers.

Mr. Cavendish has administered the Department with characteristic zeal for its interests, and received valuable support from Mr. Bonig. Mr. Brown thoroughly understood the control of convict labour and did excellent work when in charge of the rubber plantations.

I agree with the Deputy Conservator of Forests' appreciation of the services rendered by Mr. Hazlewood and those of other officials commended by him.

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Report on Forest Administration in the Andamans for the year 1917-18.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

SECTION 1.—ALTERATION IN AREA. (*Form No. 7.*)

1. There has been no alteration in the area of reserved forests during the year.

2. Fifteen acres of unclassed forests are reported by the District Officer, Ross, to have been cleared for cultivation in his district.

3. The total area of locally reserved forests in the Settlement area of the South Andaman remained at 85·09 square miles at the close of the year.

SECTION 2.—FOREST SETTLEMENT. (*Form No. 8.*)

4. No area was declared reserved forest during the year.

5. The question of placing the legal status of the forests of these islands upon a more permanent basis is still pending. The law that applies to these forests at present has been provided for in Regulation III of 1876.

SECTION 3.—DEMARCATION. (*Form No. 9.*)

6. No demarcation or repair of boundaries was carried out during the year for want of labour. There are 33·15 miles of undemarcated boundaries to be demarcated and 10 miles of demarcated boundaries to be repaired. This matter is not of great importance since no land can be cleared without the knowledge or permission of the District Officers who are supplied with maps showing clearly the position of the boundaries.

7. The total length of boundaries of all forest reserves remains unchanged at 129·01 miles at the close of the year; of which 72·21 miles are natural, 23·65 miles demarcated and 33·15 undemarcated.

SECTION 4.—FOREST SURVEYS. (*Form No. 10.*)

8. No survey work was undertaken by the Survey of India during the year.

9. A sum of Rs. 540 was paid during the year for maps printed in the previous year.

10. As the Government of India has now sanctioned the scheme for the development of the forests of the North and Middle Andamans, it will be beneficial if the remaining portion of these forests can be surveyed on 2″ scale as early as possible. Proposals for this will be submitted.

11. The total expenditure on constitution of State forests was Rs. 540 during the year as compared with Rs. 158 during the previous year.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

SECTION 1.—REGULATION OF MANAGEMENT.

(*a*) *Preparation and Control of Regular Working Plans.* (*Form No. 11.*)

12. The total area under Working Plan remains at 708 square miles of which 317 square miles are in the North Andaman, and 371 square miles in the Middle and South Andamans and adjacent Islands.

(*b*) *Preliminary Working Plan Reports.*

13. The exploration of the forests of the Little Andaman still remained in abeyance, owing to the employment of the Forest controlling staff on other important works.

14. A preliminary Working Plan Report for the fuel area in the neighbourhood of Wimberley Gunj was prepared and submitted last year, but is still pending, to be discussed by the Inspector General of Forests on his next visit to the Andamans.

(*c*) *Annual Plan of Operations.*

15. All the prescriptions laid down in the Working Plan Report for cleaning and thinning the plantations were carried out with the exception of the 1913 Teak and Casuarina 55 acres, and mangrove plantations.

The cleaning of the Ali Musjid Teak and Padauk plantation which is laid out in lines 100 feet apart over 1,270 acres, prescribed for 1916, but not carried out in that year owing to want of labour, was completed during the year. The trees show clearly the benefit of a previous cleaning in 1914 which was not prescribed in the Plan, but which was carried out for the benefit of the Inspector General of Forests' inspection in 1915. The cost of cleaning this plantation amounting to Rs. 342 was not charged for during the year.

16. Timber for export and local requirements was extracted during the year from Compartments 24, 25, 26, 27, 29, 32, 33 and 34, Sub-Periodic Block III of Middle Andaman Felling Series and also from Long Island. In the South Andaman Felling Series Sub-Periodic Block III, Compartment No. 47 and Kyd Island were tapped chiefly for Gurjan.

Section 2.—Communications and Buildings. (*Form No. 12.*)

(*a*) *Tramways, Roads and Bridges.*

17. (*i*) *Tramways.*—Considerable progress has been made during the year on the new tramline in the Middle Andaman. At the close of the year 4 miles of line was open for traffic and 3½ miles of this was metalled. The six masonry bridges reported in course of construction at the close of the previous year were finished, and in addition 5 other bridges and 13 culverts were also completed. In all some 437 feet width of streams and nallahs were bridged. In addition some 2 miles of new alignment is in course of construction and jungle clearing and earthwork are in progress. Further, it has been decided to extend the line from the Boom at Palodina to Sinkan, 4 miles further down the creek, owing to the creek being too shallow for launches and lighters except at high tide at the former place, whereas Sinkan is accessible at all tides, and it will even be possible for the " Rosamond " to come alongside a jetty for the purpose of loading if desired. This extension will only mean 2 miles of tramway as the alignment chosen will cut off large bends of the creek. This will add greatly to the efficiency of the tramway as a means of extraction. Although the mouth of the creek near Long Island is blocked by a bar of mud, which at present prevents the " Rosamond " going over except at high tide, it is thought it may be possible to clear a passage to enable her to pass in and out it all tides.

A sum of Rs. 27,227 was spent on the above work, and this was charged to A. I. a.

Eleven thousand and nineteen sleepers and 3,400 c.ft. bridge timber were sawn in the sawmill and provided free for the tramway.

18. *Wimberley Gunj Tramway.*—The total length of permanent tramway remains unchanged at 6 miles with 36 masonry, 25 wooden bridges, and one corrugated iron culvert.

One thousand three hundreed and forty-nine sleepers have been renewed during the year.

The rolling stock consists of 2 locomotives (one belonging to the Settlement), 30 large and 18 small wooden trucks and 4 trollies. Most of this is now old, and much requires replacing, no new material having been available for the last 4 years.

Several derailments have occurred on this line between Gobang and Wimberley Gunj during the year, which are chiefly due to the trucks being in a delapidated condition.

The total expenditure on maintenance of the permanent tramway (A. VII. a) amounts to Rs. 1,800 during the year as against Rs. 1,203 in the previous year. This does not include the cost of 918 c.ft. of timber which was supplied free of charge.

19. Four thousand nine hundred and three cords of fuel were extracted to the Kadakachang Sale Depôt at a cost of Rs. 32,326 as shown in paragraph 100, Chapter V of this report, and sold at the new rate of Rs. 4-12 per cord sanctioned by the Government of India during the year under report. These operations resulted in a loss of Rs. 15,935 as compared with a loss of Rs. 6,133 in the previous year, when 5,948 cords were extracted at a cost ofRs. 29,925 and sold at Rs. 4 per cord.

One of the causes for the great loss shown under fuel is that the estimated requirements by the Settlement for fuel from the Forest Department were not reached.

The Chief Commissioner estimated that the average Government demand for fuel was 8,400 cords per annum. The recommendation of the Fuel Committee to charge Rs. 5 per cord for 4 feet jungle billets was based on this average.

The Assistant Forest Officer, Wimberley Gunj, in charge of fuel operations estimated that if only 4,000 cords were extracted the cost of extraction would be Rs. 6 per cord whereas if 8,000, Rs. 4 per cord, and if 16,000, Rs. 3 per cord. These figures left no margin for profit.

20. The work of extraction of fuel at Wimberley Gunj is becoming gradually more difficult as the most accessible areas have already been worked out and only the more inaccessible areas remain. This is another reason why the cost is rising. If it were possible to transfer the fuel file to the forests along the new tramline in the Middle Andaman it would, I think, be possible to reduce the cost of extraction, and at the same time, areas cleared could be sown up with Padauk and other valuable species. To supply fuel from the Middle Andaman would require four large lighters which would be towed to and fro, suitable arrangements being made to load and unload fuel without delay. A saving would be effected in concentrating work. A large number of Settlement lighters are engaged at present in carrying fuel. It should be possible to set aside certain lighters for the above purpose.

21. *Temporary lines.*—The total length of temporary fuel lines was 6·02 miles at the close of the previous year whilst 2·20 miles was laid down and 0·70 lifted during the year. The total length of these lines is therefore 7·52 miles at the close of the year.

The total expenditure incurred on maintenance, laying and lifting of these lines (including bridges) was Rs. 1,165 as against Rs. 1,714 in the previous year, and was charged under A. I. b fuel extraction.

22. (*ii*) *Roads and Bridges.*—The cart road in Middle Andaman remained unchanged at 6 miles at the close of the year.

No extension on this road was necessary during the year. Repairs were carried out at a cost of Rs. 666. It will be unnecessary in future to keep up three miles of this cart road between Bomlungta and Kalsi as the new tramline will serve all purposes on this section.

(*b*) *Buildings.*

23. *Permanent Buildings.*—The only new permanent building of importance constructed during the year was a suitable hospital at the Base Camp Bomlungta, to accommodate 40 patients.

The small one room inspection bungalow at Bomlungta, usually occupied by the Settlement Overseer, was enlarged and converted into one with two rooms and a verandah.

A sum of Rs. 1,199 was spent on the above work, of which Rs. 1,002 was charged to A. VII. b. and Rs. 197 to A. I. a. Rupees 51 was spent on the repairs of existing permanent buildings and was charged to A. VII. b. Two thousand one hundred and forty-three c.ft. of timber for the above works were provided free of cost.

24. *Temporary Buildings.*—Rupees 334 was spent during the year on the construction and repairs of temporary buildings of which Rs. 324 was charged under A. I. a. and Rs. 10 under A. I. b.

The total expenditure incurred during the year on both permanent and temporary buildings was Rs. 1,584 of which Rs. 518 was charged under A. I. a. and Rs .10 under A. I. b. and Rs. 1,056 under A. VII b.

2,143 c.ft. of timber was used and supplied free of charge.

(*c*) *Miscellaneous Works.*

25. Rupees 100 was spent during the year for the construction of a jetty and a water tank at Beehive Hill required for supplying water for launches in the Yol Jig in Middle Andaman. This was charged under A. I. a.

26. The total expenditure on communications and buildings amounted to Rs. 32,542, of which Rs. 28,511 was charged under A. I. a., Rs. 1,175 under A. I. b. and Rs. 2,856 under A. VII.a.

Section 3.—Protection of Forests.

(*a*) *General Protection.* (*Form No. 13.*)

27. There were only two cases of unauthorized felling reported involving two men who were prosecuted as against 10 cases involving 16 men in the previous year.

Of the two men prosecuted, one was fined Rs. 5, while the other annas four only.

(*b*) *Protection from fire.*

28. No fire occurred during the year.

(*c*) *Protection from Cattle.* (*Form No. 16.*)

29. The number of cattle impounded for grazing in plantations was 235 as against 165 last year.

Considerable damage was done by the cattle of Wimberley Gunj village to teak, padauk and rubber plantations during the year, and the Chief Commissioner has therefore issued orders that double impounding fees should be demanded in case the ordinary fees do not act as a sufficient deterrent.

342·61 square miles in the South Andaman are nominally open to grazing, but grazing is actually only available within the limits of the areas cleared of forests.

(*d*) *Protection against injuries from natural causes.*

30. *Insects.*—Considerable damage was done by white ants to rubber plants in the rubber plantations of 1911 and 1915 during the year.

31. *Climbers.*—These are very troublesome in young plantations and openings caused by fellings, and can only be kept back by frequent weeding and cleaning.

Climber cutting on padauk trees only has been carried out during the year over an area of 10,971 acres in Middle Andaman.

An area of 240 acres was selected in Compartment No. 26 where complete climber cutting was done for experimental purposes in connection with padauk regeneration.

32. *Winds.*—Four large rubber trees were blown down by the wind during the year.

SECTION 4.—SYLVICULTURE.

(*a*) *Natural reproduction.*

33. The natural reproduction of padauk is unsatisfactory. The seed germinates freely in openings caused by windfalls and fellings, when these take place at the time the trees are seeding; but as soon as the overhead cover closes in regeneration is gradually suppressed and gradually disappears. All past experiments show that considerable assistance in the form of cleanings and weeding and opening the cover is absolutely necessary. In 1914 an area of 10 acres in deciduous forest at Olenleade in the Middle Andaman Southern Felling Series was selected, undergrowth was removed, varying from complete to partial clearing, and stacked in heaps, and padauk seed was broadcasted over the area. No subsequent cleanings or weeding was done. A year later this area was covered with climbers but a fair sprinkling of padauk seedlings was found. This year a dense undergrowth about 10 feet high was found on the area in which after careful search only about a dozen young padauk were found. The chance of these ever coming to anything without assistance is remote.

34. An area of 150 acres in Compartment No. 26, Sub-periodic Block III, Middle Andaman, in which climber cutting and fellings have been carried out in the last few years under the Working Plan was examined with a view to ascertaining the amount and state of the natural regeneration of padauk.

It was estimated that the natural regeneration in blanks caused by the fellings amounted in all to about 6 acres only, but the development of the seedlings which averaged about 1 foot in height had already been affected by the closing in of overhead cover. This regeneration was cleaned and weeded and light was given by girdling overhead cover consisting of inferior species.

The natural regeneration of white and black chuglam is reported to be very good in areas in which fellings have taken place while that of pyinma, toungpeing, didu and gurjan has been seen in fair quantities. Koko regeneration was hardly seen at all.

(*b*) *Artificial reproduction.* (*Form No. 18, Regular plantation.*)

35. The thinning operations in the 97½ acres of padauk and teak planted in the Gobang valley between 1883 and 1890 were completed during the year at a cost of Rs. 32.

36. The teak and padauk planted from 1892 to 1894 in lines 100 feet apart in the Ali Musjid Reserve over an area of 1,270 acres were cleaned during the year.

The cost of these operations was not defrayed during the year.

This area was partially cleaned in 1914 since when many of the trees have shown considerable improvement. On the whole the plantation would not, however, appear to be a success.

The girth of the teak varies from 11 inches to 56 inches and the padauk from 6 inches to 58 inches, the growth being very uneven and trees in many cases branching low.

37. The afzelia and mahogany plantation of 1907 comprising an area of 8 acres was not touched during the year.

38. Thinnings prescribed for certain of the mangrove plantations during the year could not be carried out for want of labour.

The area under mangrove remained at 685 acres.

39. *Rubber.*—The total area under rubber remains at 500⅛ acres.

In 1912-13 the area of rubber plantation amounted to 101 acres for which an average of 29 men were engaged throughout the year.

In 1913-14 the area under rubber was increased to 190 acres, and the average number of men employed rose to 141. In June 1914 it was decided by the Chief Commissioner and Superintendent, Port Blair, not to increase the rubber plantation owing to the difficulty of finding the necessary labour. Later

in the year it was, however, decided to increase the area under rubber to 500 acres and a promise was made that the necessary extra labour would be supplied.

During the years 1914-15, 1915-16 and 1916-17 the average number of men employed fell to 129, 106 and 106 respectively, while the planted area rose to 500 acres.

All the above labour was provided out of the general strength of forest labour, the number sanctioned for general work being 1,117 which amount, however, was never provided during those years.

Owing to the scarcity of labour the Forest Department was forced to devise a means of cultivating the rubber as cheaply as possible. This was done by a system of light hoeing carried out over the area three or four times a year.

During the year under report Mr. Long Price, a Ceylon planter travelling on business in connection with coconuts in the Nicobars, visited the rubber plantations with the Chief Commissioner.

A report and instructions given by Mr. Long Price to the Chief Commissioner was sent to undersigned, with orders to have the instructions carried out, before being given an opportunity of visiting the area with this gentleman to point out the difficulties and conditions under which the Department had laboured.

The undersigned does not agree that clean weeding the hilly portion of the estate will be beneficial owing to danger of heavy rain washing away the soil. Labour shortage has also prevented the instructions being carried out completely. So far the estate does not appear to have been benefitted by the change in treatment.

The instructions in brief were —

(*i*) that the estate should be kept clean weeded, by weeding each field monthly;

(*ii*) that drains 18″ × 18″ should be cut throughout the area.

(*iii*) 4 cwt. of lime per acre to be broadcasted.

(*iv*) that trees should be thinned to 100 trees per acre.

N.B.—The greater part of the area does not contain more than 100 trees per acre.

(*v*) tapping of all trees 18 inches girth and over to be taken in hand.

Mr. Long Price's estimates for the labour necessary to carry out the following works were :—

	Men.
(1) To keep the area cleaned, weeded .	150
(2) Hoeing	11
(3) Drains	49
	210

Labour for—

(1) Nurseries.
(2) Planting up vacancies,
(3) Path making,
(4) Liming and manuring,
(5) Tapping and manufacture,

is required in addition to the above figures.

Mr. Long Price estimated that in all he considered a permanent labour force of 750 men would eventually be required for this rubber estate. After receiving the above instructions the labour force provided for the rubber plantation has been increased to an average of 194 men only for the last three months of the year. It has not therefore been possible to carry out Mr. Long Price's recommendations entirely. It is obvious that with a totally inadequate labour force it is not possible to make a fair comparison with first class estates in Ceylon.

It is feared that the future provision of labour for this rubber plantation will tend further to accentuate the difficulty in providing labour for the ordinary forest work in the South Andaman.

40. *Rubber Nurseries.*—There were five nurseries at the commencement of the year and a sixth was started during the year. All the nurseries have been kept clean weeded during the year and a good supply of plants is available.

41. *Tapping.*—No tapping was done during the year. 2,738 trees are now over 18″ girth and were available for tapping at the close of the year.

Rupees 11,185 were spent on the rubber plantation during the year as against Rs. 9,228 in the previous year.

Cultural Operations.

42. The total area under padauk (1903 to 1911) remains at 1,303 acres as in the previous year. The padauk plantations of 1903, 1904, 1905, 1906 and 1911 comprising an area of 495 acres were cleaned during the year for Rs. 975. The following notes on the above plantations given by the Assistant Forest Officer, Wimberly Gunj, are of interest.

1903 Padauk.—13 acres. The trees in this plantation now have a girth varying from 26 inches to 45 inches with a maximum height of 35 feet. In parts the canopy is open and the trees are somewhat crooked and branched.

1904 Padauk and Pyinma.—100 acres. The girth of the trees varies from 27″ to 42″ and the maximum height is now 45 feet. The pyinma are fewer in number, but of somewhat quicker growth than the padauk, but the trees generally in this plantation are of better growth than in the 1903 plantation.

1905 Brigade Creek Padauk and Pyinma.—102 acres. The girth of the dominant trees is now from 26″ to 37″ and there are a large number of small suppressed trees from 7″ to 12″ in girth. The pyinma appears to be growing somewhat more rapidly than the padauk.

1906 Padauk and Pyinma.—175 acres. Girths from 22″ to 42″ an maximum height about 40 feet. The padauk in this area is doing really well, and is much better than the pyinma.

1911 Padauk.—105 acres. Girth from 12 inches to 21 inches and height growth up to 20 feet.

43. *Padauk broadcast sowing 1912 at Gobang.*—Area 20 acres. Cleaning was done in this plantation for Rs. 70 during the year.

44. *Teak and Padauk Gobang 1913.*—Area 35 acres. This area was cleaned for Rs. 64 during the year. The teak varies in girth from 12 inches to 18 inches and maximum height 35 feet. The padauk is growing more slowly than the teak but is following close up without being suppressed.

45. *Teak and Padauk 1914.*—Area 88 acres. A sum of Rs. 101 was spent on cleaning this area during the year. The teak varies in girth from 8 inches to 12 inches and maximum height 20 feet; compared with the 1913 plantation the teak is not doing so well here.

46. *Teak and Padauk 1916.*—Area 200 acres. This area was originally sown with teak at stakes 3 feet apart in lines 6 feet and 12 feet apart with padauk dibbled in between the lines. Owing to the teak seed being bad and failing to germinate, the whole area, with the exception of a small area of about 15 acres of padauk which was very successful, was resown with teak seed 6′×6′ in the following year 1917. These operations were only partially successful, a large number of teak again failing to germinate, and the area becoming covered with heavy grass suppressing the young seedlings. This plantation was again taken in hand during the year under report and all vacancies were resown with teak and the lines cleared at a total cost of Rs. 3,265.

47. *Albizzia Moluccana 1918.*—A small area of 23 acres has been cleared and was first sown up with padauk, and later planted with moluccana 22′×22′ as the padauk sowing was not successful.

The cost of this has amounted to Rs. 160.

48. *Padauk 1918.*—An area of 60 acres in Compartment No. 26, Sub-Periodic Block III, Middle Andamans, near Bomlungta where padauk fellings had been carried out, but where natural regeneration of padauk was found to

be wanting, was taken in hand and seedlings of about 12 inches height were collected from road-sides and planted 22 feet apart in lines 22 feet apart. Overhead cover of all inferior species was either felled or girdled and the line cleared of undergrowth. The plants were weeded twice during the year.

The total cost of clearing and planting and weeding amounted to Rs. 217 only. Further cleanings and weedings will be necessary for a few years before the plants will be able to establish themselves. The above was carried out with a view to ascertaining whether it would be possible to establish padauk artificial regeneration on a satisfactory scale at a low rate. The weeding of these lines 22 feet apart is estimated to be about 8 annas per acre. The number of times this operation will be required remains to be seen. Natural regeneration of other species will establish itself between the lines of padauk and operations to assist the padauk will no doubt be required later.

(*c*) *Operations for the Improvement of the growing stock.*

49. Climbers have been cut on all padauk trees only over an area of 10,071 acres in Compartments 24, 32, 33, 34 and 35 of the Middle Andaman Sub-Periodic Block III, at a cost of Rs. 233.

Complete climber cutting has also been carried out on an area of 240 acres in Compartment No. 26 for Rs. 95 for experimental purpose.

50. In 150 acres of this area inferior trees suppressing promising young stems of the more valuable species were girdled. Where groups of natural regeneration were found these were weeded and overhead trees girdled. The area of these groups of natural regeneration was estimated to be about 6 acres. Owing to the rapid growth of weeds it was found necessary to weed the groups of natural regeneration a second time. The cost of tending this natural regeneration amounted to Rs. 26.

(*d*) *Experiment.*

51. *Albizzia Moluccana 1915.*—Area 34 acres. The trees in this area are growing up very rapidly and are now closing in.

52. *Albizzia Moluccana and Eucalyptus 1915 at Kadaka Chang.*—Area 35 acres. The albizzia is doing well but the eucalyptus has been almost completely suppressed.

53. Rupees 23 worth of albizzia moluccana seeds were purchased during the year. A nursery was made. The seeds have germinated freely and the seedlings transferred to the new area of 1918.

Section 5.—Exploitation.

(*a*) System of Management.

(*i*) *Major Forest Produce.*

54. *Marking Operations.*—Were carried out on an area of 10,071 acres in Compartments 24, 30, 32, 33, 34 and 35 of Middle Andaman Sub-Periodic Block III.

3601 padauk, 1,677 pyinma, 644 koko, 1,282 gurjan, 1,190 white chuglam, 343 black chuglam, 150 toungpeing, and 9 lakuch were marked for felling during the year as compared with 1,559 padauk and 747 pyinma in the previous year.

55. Fellings were made in Compartments 24, 25, 26, 27, 29, 32, 33 and 34 of the Middle Andaman Felling Series Sub-Periodic Block III during the year where 2,287 padauk, 972 pyinma, 104 koko, 188 gurjan, 743 white chuglam, 297 black chuglam, 84 toungpeing, 15 lakuch and 488 other trees were felled as compared with 2,181 padauk, 1,096 pyinma, 156 koko and 1,018 trees of other species in the previous year.

297 padauk, 164 pyinma, 178 koko, 470 gurjan and 1,156 other trees were felled at Long Island during the year as compared with 77 gurjan and 325 other trees in the previous year.

4 gurjan and 12 trees of other species were felled during the year in Compartment 47 of the Southern Felling Series Block III, as compared with 812 gurjan and 89 other trees in the previous year.

300 gurjan and 91 other trees were also felled at Kyd Island in South Andaman during the year.

The total number of trees felled during the year amounted to 7,832 trees as compared with 5,754 trees in the previous year. (This includes timber used for rafting which could not be sold.)

56. *Fuel.*—Fuel for Settlement was cut in the Mount Harriett and Gobang Reserve throughout the year.

Fuel for departmental launches was cut at the forest camps.

57. *Charcoal.*—The District Officers make charcoal to meet their requirements. The Forest Department makes a small quantity of charcoal for the departmental workshop at Chatham.

(*ii*) *Minor Forest Produce.*

58. Bamboos and canes were collected from Shoal Bay throughout the year for the requirements of the Settlement. These are also cut in the forest camps for use in construction and repair of temporary buildings.

(*b*) Agency of Exploitation. (*Forms Nos. 19 and 20.*)

(*i*) *Departmental Agency.*

59. By far the greater part of the timber and fuel extracted was, as usual, by departmental agency. The following are the percentages :—

Timber 89 per cent. by volume against 86 per cent. last year.
Fuel 62 „ „ „ „ 65 „ „ „ „
Minor produce 7 per cent. by volume against 7 per cent. last year.

This represents an increase of 3 per cent. in timber and a decrease of 3 per cent. in fuel on the corresponding figures of the previous year.

60. *Major Forest Produce.*—The following statement gives the quantity of timber shipped during the year compared with those of the preceding year as follows :—

Kind of timber.	1917-18.	1916-17.	Difference.
	Tons.	Tons.	Tons.
Rough Hewn.			
Padauk	2,872	3,183	—311
Pyinma	901	694	+207
White Chuglam	125	...	+125
Miscellaneous	39	...	+39
Total	3,937	3,877	+60
Mill Sawn.			
Padauk squares	114	460	—346
„ scantlings	856	550	+306
Pyinma squares	124	70	+54
„ scantlings	186	152	+34
Gurjan squares	1,319	817	+502
„ scantlings	834	707	+127
White Chuglam squares	376	...	+376
„ „ scantlings	1,171	...	+1,171
Miscellaneous	500	495	+5
Total	5,480	3,251	+2,229
GRAND TOTAL	9,417	7,128	+2,289

The large increase in the amount of timber exported during the year is due chiefly to the fact that the Munition Board placed large orders for timber for war purposes with the Department, and sent special ships to take the same to Mesopotamia and Egypt. About 3,000 tons of timber was prepared for the Munition Board of which 2,068 tons was taken delivery of during the year.

Extra labour amounting to 150 men was promised, with the approval of the Chief Commissioner, by the Deputy Commissioner for the purpose of meeting these large demands of the Munition Board. It is much to be regretted that although the demand for timber for war purposes by the Munition Board still continues, since the close of the year the Chief Commissioner has directed that the supply of this extra labour be discontinued.

The increased number of voyages made by S. S. "Maharaja" during the year also enabled the Department to export more timber by this means than in the previous year.

Although the export of rough hewn padauk squares was reduced by 311 tons, this was more than counterbalanced by the large increase of mill sawn squares chiefly gurjan and white chuglam, but including also padauk and pyinma squares, exported.

The tonnage of squares sawn in the mill and exported during the year amounted to 1,933 tons as compared with 1,347 tons in the previous year.

3,547 tons of mill sawn scantlings were exported during the year as compared with 1,712 tons exported during the previous year.

The full benefit of the new sawmill working for the whole year is demonstrated.

61. *Fuel.*—6,879½ cords of fuel were supplied to the Settlement during the year against 7,431 cords last year, of which 5,129 cords were cut in Mount Harriett and Gobang reserves, and 1,750½ cords obtained from sawmill wastage as compared with 5,630 cords cut in forests and 1,801 cords of wastage obtained from sawmill in the previous year.

The locomotive used 215 cords of mangrove fuel cut in the Kalatang reserves against 170½ cords used last year.

The sawmill furnaces consumed 310 cords of sawn firewood as against 498 cords in the previous year.

The "Rosamond" and other launches used 1,086 cords of which 144 cords were cut in the forest camps and 942 cords obtained from the sawmill wastage as against 1,072 cords used in the previous year.

Private purchasers have bought 120¾ cords firewood during the year.

62. Seven hundred and seventy-six maunds of charcoal manufactured in the forest camps during August and September were supplied to the Settlement as against 782 maunds last year.

63. *Minor produce.*—Cane was supplied for local manufacture in the Jail and workshops as usual.

64. *Transport by land.*—The extraction of the timber from the forests is chiefly done by elephants. Buffaloes were used for dragging sunken logs in the stream beds. The new tramway in the Middle Andaman has not yet been used for the extraction of timber, but it is expected a commencement will be made next year, when areas otherwise difficult to work will be taken in hand. The difficulty in the way of procuring the necessary rolling stock at present will tend to delay the utilizing of the tramway to the full extent until normal times return.

Fuel for Settlement has been, as usual, carried to the Sale Depôt at Kadaka Chang by the Wimberley Gunj Tramway. Fuel cutting is being carried out in hilly country and dry chutes are used to convey fuel from temporary high level tramways to the main low level lines.

65. A list of elephants with details of the number of days worked by them and their condition is given in Appendix I, whilst another statement showing the names of sire and dam of all the locally born elephants as far as can be ascertained is given in Appendix II.

66. *Transport by water.*—19,388 tons of timber were brought to Port Blair during the year as against 12,310 tons in the previous year. This large increase necessitated the running of the ship night and day during the fine weather months during which period 3 trips per week were made to the Middle Andaman and back instead of the usual two.

"Rosamond" was absent in Rangoon for repairs in Dalla Dockyard for 15 days during the year.

Steam Launch "Eileen" was used chiefly for towing boats and rafts in the harbour of Port Blair as usual.

67. The total revenue from the produce extracted by the departmental agency was Rs. 9,73,788 against Rs. 6,45,195 last year.

(*ii*) *Purchasers.*

68. *Timber.*—The revenue from standing timber sold to the purchasers was Rs. 6,490 as against Rs. 7,563 in the previous year. The decrease is inconsiderable.

69. *Fuel.*—The revenue from fuel amounted to Rs. 52 as against Rs. 63 in the previous year.

70. *Bamboos.*—Rs. 42 was realized against Rs. 30 last year.

71. *Minor produce.*—Rs. 270 was realized against Rs. 267 last year.

72. The total revenue derived from all produce removed by the purchasers amounted to Rs. 6,854 as against Rs. 7,923 in the previous year.

(*iii*) *Rights and Privileges.*

73. There are no right holders. The estimated value of timber and other produce removed by District Officers and privileged villagers was Rs. 11,927 as against Rs. 11,206 in the previous year.

(*iv*) *Free Grants.*

74. Timber, fuel and other minor produce were extracted free of charge from the unclassed forests by the Settlement authorities for Government use and by the residents for their own use.

The following table shows the quantity and value of all forest produce removed free of charge by the District Officers and villagers :—

	Timber.		Fuel.		Bamboos.		Other minor produce.	Total.
	c.ft.	value.	c.ft.	value.	No.	value.		
		Rs.		Rs.		Rs.	Rs.	Rs
District Officers . . .	64,490	2,016	71,200	1,780	930,994	582	224	4,602
Villagers	22,860	619	182,880	4,572	304,800	190	1,944	7,325
Total .	87,350	2,635	254,080	6,352	1,235,794	792	2,168	11,927

75. Free grants of timber 103 c. ft. valued at Rs. 272 were made to the Superintendent, Zoological Gardens, during the year in return for deer, an attempt being made to introduce some game into the Andamans.

Free grants of timber were also made to Superintendent, Local Manufacture, Calcutta, 5·77 c. ft. Rs. 13. Messrs. Harris & Co., Cape Town, 0·64 c. ft. Re. 1.

(*c*) *Outturn and Sources of Forest Produce.* (*Forms Nos. 19 and 20.*)

76. The following table compares the outturn of the year, classified according to the agency of exploitation and kind of produce extracted, with the figures of 1916-17 :—

Agency of Exploitation.	Year.	Timber.	Fuel.	Bamboos.	Minor produce.
		c. ft.	c. ft.	No.	Rs.
Government Agency	1917-18	1,000,861	426,217	114.498	173
	1916-17	718,493	503,568	67,506	198
Purchasers	1917-18	42,493	8,400	67,600	271
	1916-17	48,869	10,160	48,975	267
Free grants	1917-18	22,860	182,880	304,800	1,944
	1916-17	23,250	186,000	310,000	1,976
District Officers	1917-18	64,490	71,200	930,994	224
	1916-17	44,755	72,560	214,808	409
GRAND TOTAL	1917-18	1,130,704	688,697	1,417,892	2,612
	1916-17	835,367	772,288	641,289	2,850

The considerable increase in the outturn of timber extracted by departmental agency is mainly due to the demand by the Munition Board for large quantities of gurjan and white chuglam timbers which are more easily accessible than other timbers usually in greater demand.

The addition of new elephants to the Division also began to make itself felt; although for the first year or two new elephants are not put to full work in order that they may become acclimatised and used to the new kinds of fodder.

The decrease in the fuel removed from the forests by Government agency is chiefly due to the continual shortage of labour for fuel extraction.

Bamboos.—The considerable increase in the number of bamboos extracted is due to the fact that a larger number of kutcha buildings were constructed during the year in the forest camps.

Minor produce.—A slight decrease in minor produce needs no explanation.

With regard to the produce extracted by purchasers the decrease in timber is due to a slight reduction in the shipment of timber by the purchasers, the amount shipped by this agency in the previous year being abnormally high as compared with previous years.

The decrease in fuel removed by the purchasers is due to the fact that 120¾ cords were bought by the villagers from the Forest Department. Fuel areas in the neighbourhood of the villages are becoming more remote.

The increase in minor produce is due to a larger amount of canes having been collected for export.

The decrease in timber, fuel and other produce removed by the free grantees is due to there being 1,524 houses in the Settlement as against 1,549 houses reported last year; the estimate being based on the number of houses.

The increase under timber and minor produce removed by the District Officers is due to a larger quantity of materials being extracted for fencing the cocoanut plantations. The decrease in fuel under this head is due to a smaller amount of fuel being available from clearings made by the Settlement.

77. The following statement shows the timber in round logs supplied to the Chatham sawmill and the outturn obtained:—

Year.	Timber sent to sawmill.		Timber received from Chatham sawmill.	Percentage of loss in conversi--
	No. of logs.	Volume.		
1917-18 . . .	13,642	714,885	407,019	43 per cent.
1916-17 . . .	12,039	517,300	230,436	55 per cent.

The considerable increase in the outturn of timber is due to the working of the new sawmill throughout the year. A larger amount of timber was converted into squares resulting in a smaller wastage by 12 per cent. than of the last year. It is also satisfactory to note in this connection that the prices obtained for mill sawn squares, compared favourably with the prices obtained for scantlings of the same timber.

78. The total expenditure on the management of the State forests during the year was Rs. 3,77,539 including extraordinary expenditure of Rs. 80,595 of which Rs. 45,668 was incurred for the purchase of live stock and Rs. 34,927 for the new launch "Surmai".

CHAPTER III.—FINANCIAL RESULTS.

(*Forms Nos. 21 to 27.*)

79. The income and expenditure of the year are compared with that of the previous year and with the average of the preceding five years in the following statement:—

—	1917-18.	1916-17.	Average 1911-12 to 1915-16.
	Rs.	Rs.	Rs.
Revenue	9,81,534	6,54,706	4,39,832
Expenditure (A	3,78,069	3,63,807	2,28,317
Expenditure (B	74,0 37	71,239	65,430
Total Expenditure .	4,52,106	4,35,046	2,93,747
Surplus	5,29,428	2,19,660	1,46,085
Percentage of net income	53·93	33·55	33·21

The revenue for the year includes a sum of Rs. 51,656 realized during the year for padauk and gurjan timber sold in London in the previous year.

The large increase in revenue is partly due to the supply of large orders for timber for war purposes, to meet which special arrangements were made and extra labour provided, and partly to an increased supply of gurjan and white chuglam timber to the Indian market at favourable rates, the latter timbers being found in large quantities in accessible areas. As both these timbers are now becoming established on the market, an endeavour will be made to introduce two other species, *viz.*, Dhup (Canarium Euphyllum) and White Bombwe (Terminalia procera). Both these species also occur in large quantities, and it is believed could be used for packing cases, etc. If a large artificial seasoning plant could be established at Port Blair, there is little doubt that there would be no difficulty in selling such timbers, as the great objection

at present is to the supply of timber green. Prices for padauk squares rose during the year from Rs. 120 to Rs. 160 per ton, gurjan squares from Rs. 70 to Rs. 107, white chuglam squares sold for Rs. 69 to Rs. 85.

The increase in expenditure is due chiefly to (i) the larger expenditure incurred on the building of the new launch "Surmai," (ii) the pay of the extra labour provided for munition work, (iii) larger expenditure on new elephants, and (iv) the high cost of all stores. The new post of Exploitation Officer and the higher rate of pay of the Sawmill Engineer and cost of running the new sawmill also affected the increase to some extent.

The percentage of net income was 53·93 per cent. against 33·21 per cent. in the previous year.

80. The prescribed analysis of revenue shows that 99·62 per cent. of the receipts came from major produce and 0·29 per cent. from minor produce, while revenue from miscellaneous sources was 0·09 per cent.

Of the expenditure 3·79 per cent. was incurred in constitution and improvements, 79·83 per cent. in connection with exploitation, and 16·38 per cent. on the administration and protection of the forests.

Revenue.

Particulars.	Amount.	Percentage.	Remarks.
	Rs.		
Major Forest Produce	9,77,750	99·62	
Minor ,, ,, ...	2,892	0·29	
Other sources	892	0·09	
Total Revenue .	9,81,534	100·00	

Expenditure.

Constitution and Improvement of the Forests . .	17,171	3·79	
Exploitation of the Forests	3,60,898	79·83	
Administration and Protection of the forests . .	74,037	16·38	
Total expenditure .	4,52,106	100·00	

81. The outstanding revenue at end of the year amounted to Rs. 3,49,045 against Rs. 1,59,073 at end of the previous year. The amount is recoverable within three months, indicating improved prospects for the next year.

82. The outstanding due to this Department by contractors and disbursers representing advances recoverable amounted to Rs. 428-0-6 at the commencement of the year and Rs. 669-13-7 at the close of the year or Rs. 241-13-1 against the year.

83. The balance of timber in stock in ghat and sale depôts at the close of the year was 187,253 c. ft. against 191,318 c. ft. at the close of the previous year.

The balance of firewood and charcoal in stock in ghat and sale depôts at the close of the year was 14,680 c. ft as against 34,806 at the close of the previous year.

The balance of minor produce in ghat and sale depôts at the close of the year amounted to Rs. 66 against Rs. 184 at the close of the previous year.

The estimated value of timber in the shape of round logs and scantlings and other produce stored at sale depôts at the close of the year was Rs. 3,53,952 against Rs. 2,07,660 at the close of the previous year.

84. The value of live and dead stock at the close of the year including the value of 11 elephants and one calf brought from India amounted to Rs. 5,03,568 against Rs. 4,88,264 at the close of the previous year.

Eight elephants were purchased in India for Rs. 33,600 during the year and were brought to this Division. Of the six elephants and one calf which were left in Buxa Division last year, three died. The remaining three animals and one calf were brought to the Andamans with the animals newly purchased during the year.

Three elephants that died in Buxa were animals newly captured in the previous year. The cause of death in each case was due in a large measure to general debility following capture. Mortality among newly captured animals is almost invariably high, and the purchase of such animals for the Andamans has been discontinued.

There were 48 elephants and three calves in this Division at the commencement of the year. Eleven elephants and one calf were brought from India and two calves were born during the year whilst three elephants died in the Division. There are therefore 56 elephants and six calves in the Division at the close of the year.

For developing work in the forests of the Andamans it has been decided in connection with the North and Middle Andaman scheme to raise the total number of elephants for the present to 80 animals. Half for the North and half for the South Andaman Division. There are at present 56 elephants of which four elephants are too old for further service, leaving 52 at present available for both the Divisions. It is therefore of great importance that the number be raised annually allowing for casualties until the full complement is reached. Eight to ten animals should therefore be purchased annually.

There were 18 buffaloes at the commencement of the year, 13 buffaloes were purchased during the year, ten of which were purchased in Burma and three locally. No casualties occurred. There are therefore 31 buffaloes at the close of the year.

CHAPTER IV.—ADMINISTRATION.

85. The Division was not visited by the Inspector General of Forests during the year.

Mr. F. H. Cavendish, Deputy Conservator of Forests, held charge of the Division throughout the year. He inspected the Divisional Office on 15th, 16th and 17th November 1917.

Mr. M. C. C. Bonig, Extra Deputy Conservator of Forests, was in charge of the Extraction Camps throughout the year except for the period from the 12th February 1918 to 27th April 1918 when he was deputed to purchase elephants for the Division.

He was promoted to the pay of Rs. 700 per mensem from the 1st May 1918.

The management of elephants and control of convict labour in the Extraction Camps has devolved on Mr. Bonig and the good results obtained are largely due to the satisfactory arrangements made by him.

Mr. A. R. Brown, Extra Assistant Conservator of Forests, was in charge of the Wimberley Gunj Sub-Division and rubber plantations up to the 20th October 1917 when he was relieved by Mr. W. C. Rooke, Extra Assistant Conservator. The former on transfer to Burma was posted to the Bassein Division.

During his term of service in this Divison Mr. Brown did excellent work on laying out and tending the new rubber plantations with the inadequate labour force at his command.

Mr. F. T. Dalton, Extra Assistant Conservator of Forests, reported his arrival for duty in Port Blair on the 14th November 1917. He was posted to the charge of the Wimberley Gunj Sub-Division and rubber plantation

and relieved Mr. Rooke, Extra Assistant Conservator of Forests, on the 21st November 1917. He has had considerable difficulties to contend with in connection with the rubber plantations, the scare caused by the Jarrawa raid on the Wimberley Gunj tramline on the 13th November, and the entirely new conditions under which he was called upon to work.

Mr. W. H. Miller, Extra Assistant Conservator of Forests, was engaged on marking duty, road and alignment work up to the 8th March 1918. He was granted privilege leave for 3 months combined with leave on private affairs for 3 months with permission to resign his appointment on expiry of the leave.

Mr. W. C. Rooke, Extra Assistant Conservator of Forests, was wholly engaged in the Middle Anadman on marking duty, sylvicultural, road and alignment work throughout the year except from 20th October 1917 to 21st November 1917 when he was in charge of the Wimberley Gunj Sub-Division and rubber plantation. His work has been consistently good and his management and control of the convict labour on the tramline has produced good results.

Mr. H. Hilbert, probationary Extra Assistant Conservator of Forests, reported his arrival for duty in Port Blair on the 4th May 1918 and was posted for general duty in the Middle Andaman.

86. Deputy Ranger Mr. T. Boreham has been appointed Exploitation Officer with effect from the 26th April 1918. As Deputy Ranger he held charge of the Revenue Range up to 19th October 1917 when he was relieved by Deputy Ranger Mr. Webbe and was engaged on timber extraction work for the remainder of the year. He held charge of the Extraction Camps while Mr. Bonig, Extra Deputy Conservator of Forests, was absent in India on deputation. He gives promise of becoming a very useful officer.

Forest Ranger Maung Tun Nyun has done good work on the new tramway in the Middle Andaman. He was granted privilege leave from the 22nd October 1917 to the 28th November 1917 and was placed on special duty in purchasing timber dragging buffaloes in Burma for this Division from 29th November 1917 to 7th January 1918. He was promoted to 3rd grade Ranger on the 1st July 1918.

Forest Ranger Maung Shwe Paung has worked satisfactorily on the alignment of the new tramway, and also on extraction works.

Deputy Ranger Babu Ram Lal has as usual done good work in the extraction camps throughout the year. His management of elephants is very good.

Deputy Ranger Mr. Webbe, on transfer from the Middle Andaman, was posted to the Revenue Range in which duty he continued up to 5th March 1918 when his services were dispensed with as he was unwilling to serve any further in the Andamans.

Deputy Ranger Babu Hira Lal was employed in the extraction camps throughout the year. He was deputed to Calcutta from the 29th May 1918 to the 12th June 1918 to bring down two newly purchased elephants.

Forester Babu Atma Singh returned to the Division on the 28th April 1918 after obtaining the Ranger Course Certificate in Higher Standard and was promoted to Deputy Ranger from the same date.

Deputy Ranger Babu Mohan Lal was on duty in connection with the sawmill throughout the year.

One Forester was confirmed in his appointment during the year, and one Forester was appointed and resigned his post.

87. Babu Gopala Panikkar of the Madras Presidency reported his arrival in Port Blair on the 22nd September 1917 and was posted as Civil Sub-Assistant Surgeon, Forest Camps, on deputation. He was granted a charge allowance of Rs. 15 per mensem during the year.

88. Mr. B. Hazlewood, Sawmill Engineer, tendered his resignation from the 1st October 1917. He was re-engaged for 3 years with effect from the 9th November 1917 on Rs. 500—25—550 with bonus of 4 annas per ton on the

monthly outturn of the sawmills on certain conditions. The increase in the outturn is largely due to his energy, and he has carried out his duties efficiently. He was granted privilege leave for 20 days from the 19th November 1917 to the 10th December 1917 under his former agreement and again privilege leave for one month and 12 days from 15th June 1918 to 27th July 1918.

The services of one sawyer and one saw sharpener were dispensed with and one sawyer resigned his appointment.

Two saw sharpeners, one driver fitter and one sawyer were appointed to fill up the existing vacancies.

One saw sharpener was promoted to winchman.

Maung Bay One, sawyer, was promoted to gunner during the year.

89. On the recommendation of the Engineer and Harbour Master, Port Blair, Shermat Ali was confirmed in the appointment of Serang of S. L. "Eileen."

The services of Driver Alli Meah were dispensed with and Driver Lal Meah appointed in his place.

90. Sheikh Ally Ghulam Hussain, Serang of S. V. "Rosamond", was granted privilege leave for 2 months combined with 6 months' furlough and 6 months' leave on medical certificate from the 26th November 1917. Serang Qutab-din of the Marine Department is acting for him. The work of the latter has been very satisfactory.

91. *Office Establishment.*—The services of two temporary clerks were dispensed with, three clerks were confirmed in their appointments and three clerks were promoted to fill existing vacancies, and one appointed during the year.

Three junior clerks were deputed in rotation to the Middle Andaman office during the year.

Head Clerk Babu C. Vijiarangam has worked hard and managed the office satisfactorily during the year.

He was granted a personal allowance of Rs. 24 at the close of the year.

The work of the Accountant Babu C. Poonnambalam and other clerks has also been quite satisfactory during the year.

CHAPTER V.—GENERAL.

92. *New Sawmill.*—The new sawmill was worked throughout the year. A few benches in the old mill were also worked for a few weeks to augment the supply of sawn timber required by the Munition Board. It is estimated about 200 tons were converted in the old mill.

It has now been proposed to work the machinery of the old sawmill in connection with the new mill. This will necessitate the erection of one large shed similar in pattern to the sheds of the new mill to accommodate the saw benches, also a new boiler house and engine room. This arrangement will enable all the available machinery to be utilized in a smaller space, and allow the outturn to be considerably increased. The large amount of valuable space on Chatham now occupied by the delapidated buildings of the old mill will then be available, and the question of erecting a suitable artificial seasoning plant with storing sheds on Chatham may also be considered. Other small additions and improvements on Chatham are being proposed in this connection. It is believed that if artificial seasoning is carried out the introduction of many soft wood species will become feasible. These cannot at present find a market owing to the green state in which timber is delivered, and the huge difficulties in the way of seasoning large quantities by natural means prevent attempts being made in that direction.

The mill was shut down for 16 days only for cleaning and petty repairs.

The following statement shows how the sawn timber was disposed of during the year compared with the previous year :—

	1917-18.	1916-17.
	Tons.	Tons.
Munition Board	1,434	...
Exported to India	3,808	2,529
„ for commission sale	...	191
Public Works Department	350	599
Settlement Departments	206	133
Departmental use	599	542
Miscellaneous	308	535
TOTAL	6,705	4,529

The following statement shows the cost of operating the sawmill during the year :—

	Cost.	
	1917-18.	1916-17.
	Rs.	Rs.
Salaries of permanent establishment	1,220	1,640
„ of temporary „	12,920	8,140
Convict Labour	28,037	23,456
Stores purchased	8,178	11,691
„ issued from stock	8,935	6,079
Timber „ „ „	1,942	5,538
Fuel consumed	310	498
Repairs by local workshops	4,370	694
„ Departmentally	...	145
Cost of purlins	1,242	...
TOTAL . Rs.	67,154	57,881
Outturn of sawn timber (including stock resawn)	8,167	4,651
Cost of sawing per ton . Rs.	8-3-0	12-7-0

The outturn of the mill for the year amounted to 8,140 tons.

The cost of sawing timber works out at Rs. 8-3-0 per ton during the year as compared with Rs. 12-7-0 per ton during the previous year. The reduction is chiefly due to the larger outturn of squares.

The opening balance of timber in stock was 1,011 tons as against 889 tons in the previous year. The balance in stock at the close of the year is 2,473 tons.

125,040 shingles equivalent to 43 tons remain in stock at the close of the year as compared with 222,340 or 75 tons at the close of the previous year.

93. *Marine.*—The following are the details of cost of running and maintenance of the Forest Department steamer and launches, etc., during the year :—

Name.	Cost of			Total cost.	Total cost in previous year.	Time spent in Dock.	Remarks.
	Stores, etc.	Establishment.	Repairs.				
S. V. "Rosamond" . .	7,477	10,969	(a) 37,221	55,667	48,745	8th to 19th September 1917, 30th December 1917 to 10th January 1918 in Port Blair, 11th to 28th March 1918 in Rangoon.	(a) Including Rs. 34,777 of which Rs. 28,629 were spent for repairs in Calcutta and Rs. 6,148 in Rangoon.
S. L. "Surmai" (under construction).	...	...	(b) 34,927	34,927	26,932	.....	(b) Part construction at Kidderpore Dockyard.
S. L. "Eileen" . .	(c) 3,938	2,396	1,164	7,498	7,471	15th to 20th August 1917 8th to 19th October 1917, 2nd to 22nd April 1918 in Port Blair.	(c) Including Rs. 540 spent for a new shaft.
S. C. "May" . . .	327	1,297	464	2,088	2,385	23rd June 1917 to 1st August 1917, 8th June 1918 to 6th July 1918.	
S. C. "Dorothy" . .	295	532	147	974	812	20th August 1918 to 7th September 1918.	
Boats and lighters .	...	...	(d) 6,060	6,060	7,614	.....	(d) Including Rs. 538 spent for the construction of a large dug-out.
Total .	12,037	15,194	79,983	1,07,214	93,959		

94. *Convict Labour.*—The sanctioned strength of forest file including 200 men for sawmill was 1,317 men or the same as last year. A daily average of 1,216 men was at work throughout the year as against 1,241 men throughout the previous year. The shortage being 88 men against the shortage of 76 men last year.

An average number of 122 men was supplied for rubber plantation during the year against an average of 108 men in the previous year.

The average number of men in the cane file remains the same as last year at 18 men.

One hundred and fifty men were sanctioned in October 1917 for special work of supplying timber for Munition Board, of which 100 men were posted to forest camp and 50 men to sawmill. This number was kept up to the sanctioned strength till the close of the year.

95. *Labour.*—The formation of a small forest village of self supporter convicts has not yet met with any success. Further attempts are being made, higher rates having been sanctioned by the Chief Commissioner to induce men to come forward. Since the source from which suitable labour can be recruited is very limited, good results are hardly expected.

96. *Jarrawa Raid.*—The Wimberley Gunj tramway was again raided by Jarrawas on the 13th November 1917 at 4-30 P.M., the fuel train returning from Goplakabang being ambushed near the Tea Garden Manager's bungalow. The Engine Driver was severely wounded and two convicts were killed and one convict slightly wounded. A number of tools were stolen, which was probably the object of the raid. The Jarrawas again all got clear away. Later in the year several parties were sent out to attempt to punish the Jarrawas, but these met with little success. One Policeman being killed by Jarrawas.

97. *New elephants.*—Mr. Bonig, Extra Deputy Conservator of Forests, was deputed from the 12th February 1918 to the 27th April 1918 to purchase elephants in India for the Department, and succeeded in obtaining some fine animals.

Eight elephants were purchased during the year in India at a cost of Rs. 33,600 as against 11 elephants at a cost of Rs. 35,600 in the previous year.

Out of the six elephants and one calf left in Buxa Division last year, three elephants died and the remaining three elephants and one calf were brought to the Andamans in addition to the eight elephants purchased and brought to this Division during the year.

The average cost of the 12 elephants landed in the Andamans works out to Rs. 4,904 each (excluding the cost of maintenance of the animals in India and allowances of the officers deputed to make the purchase).

98. *Buffaloes.*—Ranger Maung Tun Nyun was deputed from the 29th November 1917 to 7th January 1918 to purchase buffaloes in Burma.

Ten fine buffaloes were purchased for Rs. 630 and brought to Port Blair. The total cost of these buffaloes landed in Port Blair was Rs. 873-12-0. The average cost being Rs. 87-4-0 per head.

Three buffaloes were also purchased during the year locally for Rs. 150.

Buffaloes have been found useful for dragging timber in streams.

99. *Cost of Extraction of Timber.*—The actual cost of extraction of timber to Chatham per ton works out to Rs. 16 per ton during the year as against Rs. 25 in the previous year. The following table gives a comparison of the items of expenditure of the two years :—

Heading of expenditure.	Cost. 1917-18.	Cost. 1916-17.	Remarks.
	Rs.	Rs.	
Exploitation . . . . . A. I. a.	2,20,441	2,16,639	Excluding Rs. 34,927 Capital expenditure incurred on new launch "Surmai."
Feed and keep of cattle . . . . A VI. b.	31,099	30,185	Excludes Capital expenditure on purchase of elephant during the year.
¾ of stores purchased . . . . A. VI. c.	5,527	4,398	
Roads and bridges . . . . . A. VII. a.	...	860	
¾ of building . . . . . A. VII. b	1,049	2,487	
¾ of establishment . . . . B. I. and B. II.	54,465	52,286	
Interest at 3½ per cent. on total value of elephants, *i. e.*, Rs. 1,18,386 on 30th June 1918 (as per form No. 23).	4,203	2,550	
TOTAL . Rs.	3,16,784	3,09,405	
Timber extracted in tons (brought to Port Blair).	19,388	12,310	
Cost rate per ton . . . . . Rs.	16-5-0	25-1-0	

100. *Fuel.*—The actual cost of fuel extraction for the Settlement works out to Rs. 6-9-0 per cord during the year as against Rs. 5 per cord in the previous year :—

Heading of Expenditure.		Cost.		Remarks.
		1917-18.	1916-17.	
		Rs.	Rs.	
Exploitation	A. I. b	14,021	12,031	Excluding expenditure on charcoal, sawn firewood and firewood cut in forest camps for launches.
¼ of the stores purchased .	A. VI. c	1,842	1,466	
¼ of buildings	A. VII. b	350	829	
Roads and bridges . .	A. VII. a	1,800	1,203	
⅛ of establishment . .	B. I & B. II.	9,077	8,714	
Depreciation 5 per cent. on locomotive valued Rs. 6,768 on the 30th June 1918.		338	367	
Depreciation 5 per cent. on tramline valued Rs. 59,947 on 30th June 1918.		2,997	3,252	
Interest 3 per cent. on Locomotive valued Rs. 6,430 on 30th June 1918.		193	209	
Interest 3 per cent. on tramline valued Rs. 56,950 on 30th June 1918.		1,708	1,854	
Total Rs.		32,326	29,925	
No. of fuel cords extracted to sale depôt .		4,903	5,948	Excluding sawn firewood and firewood cut in forest camps for launches.
Cost rate per cord . . .	Rs.	6-9-0	5	

101. *Sales of Timber.*—The Government of India has decided to discontinue the present method of sales of timber, with effect from 19th October 1918. Timber has in the past been offered by the Forest Department for sale f.o.b. Port Blair by tender by means of notices circulated to firms and traders in India and Burma.

All timber available for sale in Calcutta (except to Government Departments) will now be sent to Messrs. Martin and Company, Calcutta, who will act as Government agents. Freight, landing and depôt charges will be deducted from the sale prices realized, while Messrs. Martin and Company will receive commission varying from 2½ to 5 per cent. according to the amount

of timber sold. The Government of India anticipate that better prices will be realized by this means, and also that it will be possible to introduce timbers which are now not known in the market.

102. *Game.*—Two Sambhur (1 stag and 1 doe said to be in calf) have been brought to the Andamans during the year and were let loose at Bomlungta in the Middle Andaman. It has been noted that young padauk seedlings are browsed on by these animals and if this propensity is general it will not be advisable to encourage them.

F. H. CAVENDISH,
Deputy Conservator of Forests,
Andamans.

DATED PORT BLAIR;
The 25th October 1918.

(Paras. 1 to 3.)

Form No. 7.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Area of Reserved Forests, Protected Forests, Unclassed or Public Forest Land, and Leased Forests, 1917-18.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st July 1917.		Added during the year.	Excluded or transferred to other heads.	Area on 30th June 1918.		No. and date of notification of addition or transfer, etc.	Remarks.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.		
1	2	3	4	5	6	7	8	9	10	11	12
						*Reserved Forests.**					
Andamans.		South Andaman Island (total area of mainland 474 square miles.)	1. Mount Harriett	25,600	40·00	...	...	25,600	40·00		* The so-called reserved forests are under the same legal status as unclassed forests. Their regulation is provided for in Section 10, Andaman and Nicobar Manual.
			2. Hope Town	415	0·65	...	...	415	0·65		
			3. Goplakabang	1,965	3·07	...	...	1,965	3·07		
			4. Brigade Creek	2,344	3·66	...	...	2,344	3·66		
			5. Namuna Ghar	1,275	1·99	..	...	1,275	1·99		
			6. Ali Musjid	14,916	23·30	...	...	14,916	23·30		
			7. Bumlitan	496	0·78	...	...	496	0·78		
			8. Port Mouat	6,300	9·84	...	...	6,300	9·84		
			9. Dhani Khari	1,152	1·80	...	...	1,152	1·80		
			TOTAL	54,463	85·09	...	...	54,463	85·09		
						Unclassed Forests.					
		Andaman Island.	1. South Andaman	219,266	342·61	...	15 (*a*)	219,251	342·58		(*a*) Transferred to Settlement.
			2. Middle ,,	365,311	570·80	...	...	365,311	570·80		
			3. North ,,	317,184	495·60	...	...	317,184	495·60		
			4. Baratang group	78,234	122·24	...	...	78,234	122·24		
			5. Ritchies Archipelago.	63,874	99·80	...	...	63,874	99·80		
			6. Rutland	30,925	48·32	...	...	30,925	48·32		
			7. The Laybrinth Island.	6,886	10·76	...	...	6,886	10·76		
			8. North Sentinel	14 822	23·16	...	...	14,822	23·16		
			9. South ,,	358	0·56	...	...	358	0·56		
			10. Little Andaman	190,771	298·08	...	...	190,771	298·08		
			11. Other Islands	70,510	110·17	...	...	70,510	110·17		
			TOTAL	1,358,141	2,122·10	...	15	1,358,126	2,122·07		
			GRAND TOTAL	...	2,207·19	...	15	...	2,207·16		

Form No. 8.

(Paras. 4 and 5.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Progress made in Forest Settlements during the year 1917-18.

Forest Division.	Civil District or Territory.	Name of Forest.	Area in square miles.			Cost during year.		Entire cost per square mile of areas finally settled.	Government Notification of Settlement.	
			Finally settled during year.	In hand at commencement of year.	Taken in hand during year.	In Forest Accounts.	In other Accounts.		No.	Date.
1	2	3	4	5	6	7	8	9	10	11
Andamans . .	South Andaman, Settlement.	...	...	85·09	...	...	...	...	...	...

Total area at the close of the year 85·09 square miles.

Form No. 9.

(Paras. 6 and 7.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Record of Demarcation and Maintenance of Boundaries, 1917-18.

Division.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at close of the year.	Length of boundaries still to be demarcated at close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.		Remarks.
								On new work.	On repairs.	
1	2	3	4	5	6	7	8	9	10	11
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.	
Andamans . . .	...	...	23·65	23·65	33·15	72·21	129·01	...	...	

N.B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private or other lands within the forests, but not the limits of sub-divisions, such as compartments and coupes, etc.

Form No. 10.

(Paras. 8 to 11.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Statement of Forest areas surveyed and under survey during the year 1917-18.

Division.	AREA SURVEYED AND UNDER SURVEY DURING THE YEAR 1917-18.																					COST.		
	SPECIAL SURVEYS—MAPS ON 2-INCH SCALE OR OVER, BY SURVEY OF INDIA DEPARTMENT.						ORDINARY, INCLUDED IN TOPOGRAPHICAL PROGRAMME OF THE SURVEY OF INDIA OR IN DISTRICT SURVEYS						CHAIN AND COMPASS OR OTHER SURVEYS BY LOCAL OFFICERS.									Areas remaining to be taken under Survey.	Total Forest area at end of the year, as per Form No. 7.			
	WITH INTERIOR DETAILS.			BOUNDARY SURVEYS.			WITH INTERIOR DETAILS.			BOUNDARY SURVEYS.			WITH INTERIOR DETAILS.					BOUNDARY SURVEYS.							
													4-INCH OR OVER.		UNDER 4-INCH.										
	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Previous.	Of year.	Total Cost.	Previous.	Of year.	Total Cost.			Previous.	Of year.	Entire cost of all Surveys at end of the year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Sq. Ms.	Sq Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Sq. Ms.	Sq. Ms.	Rs.	Rs.	Rs.
Andamans	527 (*a*)	...	60,103	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·5	...	34	496(*b*)	2,207	60,137	...	60,137

(*a*) 447 square miles in the Middle Andaman and 80 square miles in Baratang group.

(*b*) Forest Survey on 2″ scale for North Andaman will be required shortly.

Form No. 11.

(Paras. 12 to 16.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Progress made in Working Plans, 1917-18.

Division.	AREA UNDER SANCTIONED WORKING PLANS.					AREA NOT UNDER WORKING PLANS.			Total forest area in form No. 7. (Total of columns 5, 7, 8 and 9).	REVISIONS.			
	At commencement of year.	Added during year.	Deducted during year.	At close of year.		Plans under preparation.	Plans not under preparation.			Due or required.	In progress at end of year.	Revised plans sanctioned during year.	Expenditure on working plans during the year.
				Actual area.	Percentage of total forest area (as shown in column 10).		Required at present.	Not required at present.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Per cent.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Sq. M.	Rs.
						Reserve Forests.							
Andamans	...	...	...	...	...	...	...	85·09(*a*)	85·09	...	...	...	...
						Unclassed Forests.							
	708	...	...	708(*b*)	33·36	...	...	1,414·07	2,122·07	...	...	...	...

(*a*) Parts of these reserves are included in the Southern felling series.

(*b*) 317 square miles in the North Andaman and 391 square miles in the Middle and South Andamans and adjacent Islands.

Form No. 12. (Paras. 17 to 26.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Statement showing Communications and Buildings during the year 1917-18.

Division.	NEW WORKS UNDERTAKEN DURING THE YEAR.														REPAIRS EXECUTED DURING THE YEAR.											
	Buildings.					Roads and paths.								Other works.		Buildings.					Roads and paths.							Other works.	
	Expenditure on				Total expenditure incurred.	Cart-roads		Tram line.		Others.		Total length of paths or roads.	Total expenditure incurred.	Expenditure incurred.	Total expenditure on new works.	Expenditure on				Total expenditure incurred.	Cart-roads.		Tram line.		Others.		Total length of paths or roads.	Total expenditure incurred.	Total expenditure incurred.	Total expenditure incurred.
	Head-quarter houses.	Rest houses.	Houses for subordinate establishment.	Others.		Length.	Cost.	Length.	Cost.	Length.	Cost.					Head quarter houses.	Rest houses.	Houses for subordinate establishment.	Others.		Length.	Cost.	Length.	Cost.	Length.	Cost.				
1	2(a)	2(b)	2(c)	2(d)	3	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	5	6	7	8	9(a)	9(b)	9(c)	9(d)	10	11 (a)	11 (b)	11 (c)	11(d)	11 (e)	11 (f)	12	13	14	15
Andamans	...	59	665(a)	(b) 475	1,199	...	...	(e) 4 1/2 Miles.	(d) 27,227	...	...	4 3/4 Mile.	27,227	100	28,526	...	...	2	49	51	6 Miles.	(e) 666	6 Miles.	1,800	...	...	12	2,466	...	2,517

(a) Including Rs. 105 charged under A. I. a.
(b) Includes Rs. 92 charged under A I. a.
(c) Earthwork on tram line completed 1 3/16 miles tram road metalled 3¼ miles.
(d) Rupees 27,227 charged under A I a.
(e) Rupees 666 charged under A. I. a.

Form No 13. (Paras. 27 and 28.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Statement showing register of breaches of Forest Rules during the year 1917-18.

Forest Division.	Cases pending from previous year.			New cases of the year.														Total cases.				Disposed of during the year.												Cases pending at close of year.		
				Injury to forest by fire.			Unauthorised felling.			Unauthorized grazing.			Other offences.			Total.							Convictions.				Acquittals.				Total.							
																						Cases.		Persons.		Cases.		Persons.		Cases.			Persons.				
	A	B	All	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	All	A	B	A	B	A	B	A	B	A	B	All	A	B	All	A	B	All
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Andamans	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	2	...	2	...	...	...	...	...	2	...	...	2	...	...	...	...	...

The Indian Forest Act is not in force in the Andamans.
NOTE.—A means cases taken into court.
B means cases disposed of under Section 67 of the Indian Forest Act, 1878.
C means undetected cases.

Form No. 16. (Paras. 29 to 34.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Area closed and open to grazing during 1917-18.

Division.	Area in square miles.					
	Closed to all animals.		Open to grazing.			
			Of all animals.		Of all animals except browsers (camels, sheep and goats).	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.	Part of year.
1	2	3	4	5	6	7
Andamans	85·09	...	342·61*	0·03	...	...

* Area of unclassed forests in the South Andaman Settlement.
No grazing or fodder grasses available.

Form No. 18. (Paras. 35 to 58.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Artificial reproduction for the forest year 1917-18.

Division.	Kind of Plantation	Area in acres. On 1st July 1917.	Added during the year.	Excluded during the year.	Area on 30th June 1918.	Expenditure during the year. Creation.	Up-keep.	Total expenditure from commencement. Creation.	Up-keep.	Revenue during the year.	Total revenue from date of creation of plantation.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Regular.					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Andamans.	Padouk (Goplakabang) 1883	3	...	...	3	...	...	Not known		...	...	
	„ „ 1884	4	...	...	4	...	...	do.		...	...	
	„ „ 1885	8½	...	...	8½	...	...	do.		...	...	
	„ „ 1886	10	...	...	10	...	...	do.		...	...	
	Teak and Padouk „ 1887	12	...	...	12	...	...	558	Not known	...	...	
	„ „ „ 1889	15	...	...	15	...	...	1,177	do.	...	...	
	„ „ „ 1890	45	...	...	45	...	32	1,096	do.	...	...	
	„ (Alimusjid) . 1892	320	...	...	320	...	...	3,003	do.	...	...	Cleaning was done at a cost of Rs. 342 but the expenditure was not charged during the year.
	„ „ . 1893	550	...	...	550	...	...	2,745	do.	...	...	
	„ „ . 1894	400	...	...	400	...	...	1,524	do.	...	...	
	Mangrove (Namunaghar) 1897	442	...	...	442	...	...	1,906	916	...	...	
	„ (Dhani Khari) 1899	243	...	...	243	...	...	1,975	475	...	...	
	Para rubber (Namunaghar) 1881	⅛	...	...	⅛	...	4	18	118	...	...	
	„ (Goplakabang) 1906 to 1916	500	...	...	500	...	11,181	28,051	39,329	...	239	
	Afzelia and Mahogany . 1907	8	...	...	8	...	...	79	207	...	...	
	Eucalyptus . . . 1913	2½	...	...	2½	...	...	302	...	...	...	
	Total regular plantation	2,563⅛	...	...	2,563⅛	...	11,217	...	...	...	239	
	Other forms of artificial reproduction.											
	Padouk area 1903 to 1911	1,303	...	...	1,303	...	975	17,918	17,060	...	...	
	Padouk broadcast sowing (Goplakabang) 1912	20	...	...	20	...	70	138	488	...	...	
	Rutland, Partial clearing with sowing	35	...	...	35	...	...	167	48	...	...	
	Teak and Padouk (Goplakabang) 1913	35	...	...	35	...	64	559	720	...	...	
	Teak with exotic (Goplakabang) 1913	55	...	...	55	...	...	460	507	...	...	
	Teak and Padouk (Goplakabang) 1914	88	...	...	88	...	101	1,365	958	...	...	
	Albizzia molucanna (Goplakabang) 1915	34	...	...	34	...	...	70	303	...	...	
	Albizzia and Eucalyptus (Kadakachang) 1915	35	...	...	35	...	...	472	334	...	...	
	Cultural operations, Long Island	10	...	...	10	...	...	174	8	...	...	
	„ „ Bajalunga	5	...	...	5	...	...	22	...	...	...	
	Teak and Padouk (Goplakabang) 1916	200	...	...	200	1,782	1,483	5,426	2,583	...	...	
	Albizzia molucanna and Padouk (Goplakabang) 1918	...	23	...	23	160	...	160	...	...	...	
	Padouk Middle Andamans 1918	...	60	...	60	(a) 25	...	25	...	...	...	(a) Rupees 217 was also spent on cleaning jungle, etc., but was charged under A. I. a.
	Total artificial reproduction	1,820	23	...	1,843	1,967	2,693	...	...	...	...	
	Grand Total	4,383⅛	23	...	4,406⅛	1,967	13,910	...	...	...	...	
	Grand total expenditure as charged under A VIII E.					15,877						

Note.—Up-keep includes cleanings, weedings, thinnings, filling up blanks, etc. Cultural operations are defined in the memorandum appended to Circular No. 10-F., dated the 5th August 1904.

Form

FOREST DEPARTMENT,

Outturn (in thousands of cubic feet, solid) of Timber and Fuel

Division.	Timber in the rough, Logs.					Timber in the rough, Poles.					Sawn or square Timber.				
	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
I.—Reserved															
	66	...	...	...	66	...	...	(a) 12	19	31	...	...	...	...	...
	66,754	...	...	...	*66,754*	...	...	*11,430*	*19,461*	*30,892*	...	...	...	...	...
II.—Protected															
Andamans															
															Nil.
III.—Unclassed															
	715	...	...	...	715	8	...	(a) 11	45	64	(c) 212	41	...	...	253
	715,017	...	...	...	*715,017*	*7,979*	*59*	*11,430*	*45,029*	*64,497*	*211,111*	*41,261*	...	...	*2,52,372*
IV.—Leased															
															Nil.
Total	781	...	...	...	781	8	...	23	64	95	212	41	...	...	253
	781,771	...	...	...	*781,771*	*7,979*	*60*	*22,860*	*64,490*	*95,389*	*211,111*	*41,261*	...	...	*252,372*

Figures in Italics

(Paras 59 to 78.)

No. 19.

INDIA, ANDAMANS.

during the year 1917-18 and Agency of Exploitation.

Miscellaneous.					Total Timber.					Fuel.					Total Outturn.	Remarks.
Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.	Government.	Purchasers.	Free Grantees.	District Officers.	Total.		
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	
Forests.																
...	...	...	...	...	66	...	(a) 12	19	97	413	...	(b) 92	20	525	622	(a) An estimate based on number of free grantees hut :— 10 Bullies = 5 c. ft. 2 posts = 10 ,, are allowed for each hut.
...	...	...	...	...	*66,754*	*1*	*11,430*	*19,461*	*97,646*	*413,120*	...	*91,440*	*20,160*	*524,720*	*622,366*	
Forests.																(b) There are 1,524 house holders and quantity of fuel removed per house is estimated at 1½ cord. 1 cord=80 c.ft. solid.
...	1	...	...	1	935	42	(a) 11	45	1,033	(d) 13	8	(b) 92	51	164	1,197	(c) Logs squared with axe.
...	*1,172*	...	...	*1,172*	*934,107*	*42,492*	*11,430*	*45,029*	*1,033,058*	*13,097*	*8,400*	*91,440*	*51,040*	*163,977*	*1,197,035*	(d) Including charcoal 1 md. = 8 c. ft. solid. Fuel 1 cord = 80 c. ft. solid.
Forests.																
...	1	...	...	1	1,001	42	23	64	1,130	426	8	184	71	689	1,819	
...	*1,172*	...	...	*1,172*	*1,000,861*	*42,493*	*22,860*	*64,490*	*1,130,704*	*426,217*	*8,400*	*182,880*	*71,200*	*688,697*	*1,819,401*	

represent cubic feet.

Form No. 20. (Paras. 59 to 78.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Outturn of Minor Forest Produce during the year 1917-18.

Description of produce.	PRODUCE REMOVED OR UTILIZED										Remarks.
	By Government Agency.		By Purchasers.		By Free grants.		By District Officers.		Total.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
1	2	3	4	5	6	7	8	9	10	11	12
		Rs.		Rs.		Rs.		Rs.		Rs.	
	I.—Reserved Forests.										
Bamboos . . No.	93,958	59	42 ,85	27	152,400	95	813,168	508	1,102,351	689	The columns 6 and 7 are estimated based upon the following data :—
Canes . . „	208,985	131	2,550	2	30,480	19	2,339	1	244,354	153	There are 1,524 self-supporters and free resident houses, each of which is allowed—
Thatching leavss . Bdles	...	...	2,338	146	15,240	953	85	5	17,663	1,104	200 bamboos, 40 canes and 20 bundles thatching leaves annually.
Pan leaves . Cooly load	...	...	...	...	...	...	...	...	...	...	All other figures are actuals.
Total .	...	190	...	175	...	1,067	...	514	...	1,946	
	II.—Protected Forests.										
	Nil										
	III.— Unclassed State Forests.										
Bamboos . . No.	20,540	13	24,775	15	152,400	95	117,826	74	315,541	197	
Canes . . „	19,588	12	5,300	51	30,480	19	31,513	20	86,881	102	
Thatching leaves . Bdles	476	30	1,119	70	15,240	953	3,171	198	20,006	1,251	
Pan leaves . Cooly load	...	...	27	2	...	...	...	...	27	2	
Total .	...	55	...	138	...	1,067	...	292	...	1,552	
	IV.—Leased Forests.										
Total .	*Nil*										
GRAND TOTAL .	...	245	...	313	...	2,134	...	806	...	3,498	

Form No. 21. (Para. 83.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Account of Timber and other Produce cut or collected by Government Agency and brought to Depôts, sold locally, or otherwise disposed of, during the year 1917-18.

Name of Division.	Balance at commencement of the year in forests and sale depôts.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forests and sale depôts.
1	2	3	4	5	6
		TIMBER (cubic feet).			
		Padouk.			
	72,579	349,242	421,821	364,668	57,153
		Koko.			
	1,581	29,790	31,371	20,936	10,435
		Black Chuglam.			
	826	33,266	34,092	22,857	11,235
		Satin Wood.			
	14	...	14	14	...
Andamans					
		Pyinma.			
	42,261	99,771	142,252	141,428	20,824
		Gurjan.			
	42,191	219,199	261,390	211,126	50,264
		Other logs.			
	31,846	261,598	293,444	256,102	37,342
		Poles and Bullies.			
	...	7,979	7,979	7,979	...
Total Timber	191,318	1,021,045	1,212,363	1,025,110	187,253
		FUEL (cubic feet solid)			
		Jungle firewood			
	29,740	424,680	454,420	440,180	14,240
		Sawn firewood.			
	506	277,948	278,454	278,014	440
		Charcoal.			
	4,560	2,800	7,360	7,360	...
Total Fuel	34,806	705,428	740,234	725,554	14,680
		Minor produce.			
	Rs. 184	Rs. 6,669	Rs. 6,853	Rs. 6,787	Rs. 66

Form No. 22. (Para. 83.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1917-18.

Description of timber and other produce.	ON HAND AT COMMENCEMENT OF THE YEAR.			ON HAND AT CLOSE OF THE YEAR.			DIFFERENCE IN VALUE.		REMARKS.
	No.	C ft.	Value.	No.	C. ft.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8	9	10
			Rs.			Rs.	Rs.	Rs.	
Timber—									
Logs	1,237	57 087	84,940	1,594	102,605	1,33,285	48,345	...	
Scantlings	94,832	63,860	1,22,697	1,87,972	128.295	2,20,642	97,945	...	
Total	96,069	120 947	2 07,637	189,566	230,900	3,53,927	1,46,290	...	
Firewood c. ft. solid	...	506	23	...	440	25	2	...	1 cord=88 c.ft. solid.
Charcoal	...	...	...	...	...	...	...	...	1 maund=8 c.ft. solid.
Total	...	506	23	...	440	25	2	...	
GRAND TOTAL	..	...	2,07,660	...	...	3,53,952	1,46,292	...	

Net difference in favour of the year Rs. 1,46,292.

Form No. 23.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Abstract showing the Value of Live and Dead Stock for the year 1917-18.

Description of Live and Dead stock.	On hand at commencement of the year.		On hand at close of the year.		Difference in value.		Remarks.
	No.	Value.	No.	Value.	In favour of the year.	Against the year.	
1	2	3	4	5	6	7	8
LIVE STOCK.		Rs.		Rs.	Rs.	Rs.	
Elephant . . .	48	72,153	56	1,18,386	46,233	...	Depreciation 10 per cent. 11 new elephants brought from India during the year. 3 elephants died in Andaman and 3 died in Buxa Division.
,, Calver . .	3	703	4	1,710	1,007	...	Add 10 per cent; one calf was brought from India and 2 born locally.
Buffaloes . . .	18	705	31	1,659	954	...	Depreciation 10 per cent. 13 buffaloes were purchased.
Total Live Stock .	69	73,561	91	1,21,755	48,194	...	
DEAD STOCK.							
Steam Vessels.							
Steam Vessel "Rosamond"	1	1,06,495	1	1,01,171	...	5,324	Depreciation 5 per cent.
,, Launch "Eileen" .	1	14,851	1	14,261	...	590	,, ,,
,, Cutter "May" .	1	3,300	1	3,135	...	165	,, ,,
,, ,, "Dorothy".	1	1,922	1	1,826	...	96	,, ,,
Oil motor "Ruby" . .	1	228	1	217	...	11	,, ,,
Boats and Lighters.							
Lighters. . . .	2	1,064	2	1,011	...	53	,, ,,
Boats, timber towing .	16	6,843	13	5,361	...	1,482	,, ,, 3 boats condemned.
,, Officers rowing .	2	375	2	357	...	18	Depreciation 5 per cent.
,, Jolly . . .	4	1,106	4	1,051	...	55	,, ,,
,, Rowing, 10 Oars .	1	262	1	249	...	13	,, ,,
,, Life . . .	1	1,071	1	1,013	...	58	,, ,,
Dingies, Bengal and Burma	8	467	9	802	335	...	,, ,, 1 large dugout made.
Plant and Machinery.							
Old Sawmill . . .	...	11,706	1	10,536	...	1,170	Depreciation 10 per cent.
New ,, . . .	...	1,41,930	1	1,26,495	...	15,435	,, ,, cost of purlins included.
Crane	1	119	1	113	...	6	Depreciation 5 per cent.
Portable tramway . .	25¾ miles 1 locomotive 73 trucks 5 trollies.	68,778	25¾ miles 1 locomotive 65 trucks 3 trollies.	65,040	...	3,738	,, ,,
Carts, small . . .	2	60	10	457	397	...	Depreciation 10 per cent. 8 carts in Middle Andaman included.
Buildings (wooden) . .	...	11,107	...	8,995	...	2,112	Depreciation 10 per cent. Cost of new buildings included.
Mathematical instruments	...	7,047	...	6,533	...	514	Depreciation 5 per cent. Cost of new instruments included.
Furniture . . .	...	800	...	695	...	105	Depreciation 10 per cent. Cost of furniture included.
Stores (marine and miscellaneous).	...	35,172	...	32,495	...	2,677	Difference in valuation at commencement and end.
Tota Dead Stock .	...	4,14,703	...	3,81 813	732	33,622	
GRAND TOTAL .	...	4,88,264	...	5,03,568	48,926	33,622	

Net difference in favour of the year Rs. 15,304.

Form No. 24. (Para. 79.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Revenue of the different Divisions during 1917-18.

REVENUE.

	₹	a.	p.
I.—Timber and other produce removed from the forests by Government Agency—			
a. Timber	9,38,412	1	6
b. Firewood and charcoal	32,796	0	0
c. Bamboos	114	15	9
d. Sandal-wood	...		
e. Grass and other minor produce	2,465	2	0
Total I	9,73,788	3	3
II.—Timber and other produce removed from the forests by consumers or purchasers—			
a. Timber	6,489	7	1
b. Firewood and charcoal	52	4	0
c. Bamboos	42	4	0
d. Grazing and fodder grass	...		
e. Other minor produce	270	3	0
f. Other items	...		
g. Commutation fees	...		
Total II	6,854	2	1
III.—Drift and waif wood and confiscated forest produce	405	0	0
Total III	405	0	0
IV.—Revenue from forests not managed by Government—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forests	...		
Total IV	...		
V.—Miscellaneous—			
a. Fines and forfeitures	...		
b. Refunds	16	11	7
c. Other sources	469	14	7
Total V	486	10	2
Grand Total Revenue	9,81,533	15	6

Form No. 24. (Para. 79.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Expenditure of the different Divisions during 1917-18.

EXPENDITURE.

A.—CONSERVANCY AND WORKS.

	R	a.	p.	
I.—Timber and other produce removed from the Forests by Government Agency—				
a. Timber	2,55,368	7	1	
b. Firewood and charcoal	14,979	13	1	
c. Bamboos	31	4	0	
d. Sandal wood	.....			
e. Grass and other minor produce	1,842	13	0	
Total A. I.	2,72,222	5	2	
II.—Timber and other produce removed from the forest by consumers or purchasers	344	9	7	
Total A. II	344	9	7	
III.—Drift and waif wood and confiscated forest produce	.....			
Total A. III	.....			
IV.—Revenue from forests not managed by Government—				
a. Duty on foreign timber and other forest produce	.....			
b. Revenue from shared and private forests	.....			
Total A. IV	.....			
V.—Rent of leased forests and payments to shareholders in forests managed by Government	.....			
Total A. V.	.....			
VI.—Live-stock, stores, tools and plant—				
a. Purchase of cattle	37,998	4	10	*+7,669-11-2*
b. Feed and keep of cattle	38,299	11	10	*—7,200-14-5*
c. Purchase of stores, tools and plant	7,838	13	4	*—468-12-9*
Total A. VI	84,136	14	0	
VII.—Communications and Buildings—				
a. Roads and Bridges	1,799	10	0	
b. Buildings	1,399	2	4	
c. Other works	.....			
Total A. VII	3,198	12	4	
VIII.—Organization, improvement and extension of forests—				
a. Demarcation	.....			
b. Cost of Forest Settlements; compensation for land and rights	.....			
c. Surveys	540	0	0	
d. Working plans	.....			
e. Sowing and planting	15,877	7	2	
f. Protection from fire	.....			
g. Other works	753	2	0	
Total A. VIII	17,170	9	2	
IX.—Miscellaneous—				
a. Law charges	996	1	11	
b. Other charges	.....			
Total A. IX	996	1	11	
Total A.—Conservancy and Works	3,78,069	4	2	

Italic figures represent difference between Comptrollers and Divisional figures.

Form No. 24. (Para. 79.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Summary of Expenditure of the different Divisions during 1917-18.

	R	a.	p.
BROUGHT FORWARD TOTAL A.—CONSERVANCY AND WORKS.	3,78,069	4	2
B.—ESTABLISHMENTS.			
I.—SALARIES—			
a. Conservators	.....		
b. Superior officers	33,861	9	8
c. Subordinate forest and depôt establishments	13,459	11	2
d. Office establishments	7,800	12	0
e. Deputation and special allowances	9,488	10	7
f. Exchange compensation allowance	.....		
TOTAL B. I	64,610	11	5
II.—TRAVELLING ALLOWANCES—			
a. Conservators	.....		
b. Superior officers	5,697	4	1
c. Subordinate forest and depôt establishments	2,313	11	3
d. Office establishments	.....		
TOTAL B. II	8,010	15	4
III.—CONTINGENCIES—			
a. Stationery	.....		
b. Carriage of tents and records	.....		
c. Rents, rates and taxes	.....		
d. Pay of police guards	.....		
e. Official postage	592	1	0
f. Sundries	822	15	9
TOTAL B. III	1,415	0	9
TOTAL B.—ESTABLISHMENTS	74,036	11	6
GRAND TOTAL OF EXPENDITURE	4,52,105	14	8
SURPLUS	5,29,428	0	10

Form No. 25.

FOREST DEPARTMENT, INDIA, ANDAMANS.

Dr. *Account Current for the year 1917-18.* Cr.

	₹ a. p.	₹ a. p.		₹ a. p.	₹ a. p.
To Cash Balance	...	268 4 10	*I.—Refunds and Drawbacks*	...	2 4 0
VIII—Asseesed Taxes—			By Expenditure as per annual summary, Form No. 24	...	4,52,301 0 4
To Income Tax	...	1,749 14 0			
„ Revenue as per annual summary, Form No. 24	...	(a)9,83,698 7 4 (a) −2,164 7 10	„ Bengal and Madras Service Family Fund	...	195 0 8
„ Service Funds	...	...	„ Deposits	...	...
„ Bengal and Madras Service Family Pension Fund	...	335 13 5	„ General Provident Fund	...	1,617 3 0
„ Deposits	...	...			
„ Forest Officers' Provident Fund	...	1,470 0 0	*Forest Cash Remittances, Local—*		
„ General Provident Fund	...	2,308 0 0			
			By Remittances to treasuries	...	7,57,128 2 1
			„ Inter-divisional transfers	...	...
Special Account –			„ Unpaid cheques written back	...	11,480 1 2
To General Family Pension Fund	...	707 8 0	„ Forest advances	...	72,137 8 3
			„ Objection book advances	...	30 0 0
Forest Cash Remitances, Local—			„ Suspense account	...	7,577 13 9
			„ Account Current (other Governments)	...	...
To Forest cheques drawn	...	1,53,728 7 8	„ Account between England and India, His Majesty's Indian Government	...	51,780 11 0
„ Inter-divisional transfers	...	641 15 0			
„ Forest advances	...	71,895 11 2			
„ Objection book advances	...	206 10 8			
„ Motor car advance	...	120 0 0	*Account between India and Burma—*		
„ Suspense account	...	7,577 13 9			
„ Account Current (other Governments)	...	...	III.—Items adjustable by India	...	1,604 10 8
			IV.—Items adjustable by Burma	...	143 12 0
Account between India and Burma—					
			Account between India and Bihar and Orissa—		
III.—Items adjustable by India	...	8,823 0 11			
IV.—Items adjustable by Burma	...	350 0 0	IV.—Items adjustable by Bihar and Orissa	...	1,944 10 5
Account between India and Bihar and Orissa –			*Account between India and Bengal—*		
III.—Items adjustable by India	...	13,700 0 0	IV.—Items adjustable by Bengal	...	55,912 5 1
Account between India and Bengal—			*Account between India and United Provinces of Agra and Oudh—*		
III.—Items adjustable by India	...	7,529 2 6			
			III.—Items adjustable by India	...	6 12 0
Account between India and United Provinces of Agra and Oudh—			IV.—Items adjustable by United Provinces	...	771 4 7
IV.—Items adjustable by United Provinces	...	771 4 7	*Account between India and Madras—*		
			III.—Items adjustable by India	...	10,422 13 11
Inter-Departmental Transfers—			IV.—Items adjustbale by Madras	...	2,318 11 5
Military Department Supply Account	...	278 7 0	*Inter-Departmental Transfers –*		
Telegraph Department	...	130 0 0			
Post Office „	...	492 2 1	Military Department, Burma Division	...	9 12 3
			Marine Department	...	31,518 13 4
Marine „	...	64,641 13 9	Civil Department	...	70,924 1 2
					+195 0 8
Civil „	...	2,08,347 10 8 (a)+2,164 7 10	Cash balance	...	139 12 11
TOTAL	...	15,29,772 3 4	TOTAL	...	15,29,772 3 4

(a) Represents transfer adjustment on account of revenue of forest year 1916-17.

Form No. 26. (Para. 81.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Revenue received and Outstandings on account of Revenue during 1917-18.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the Department to end of year.	Remarks.
1	2	3	4	5	6	7	8
		₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	
Andamans	Revenue from timber and other produce removed by Government Agency.	1,59,039 13 7	11,63,727 0 3	13,22,766 13 10	9,73,788 3 3	3,48,978 10 7	Approved firms pay at 90 days sight shipping documents.
	Revenue from timber and other produce removed by purchasers	...	6,854 2 1	6,854 2 1	6,854 2 1	...	
	Other revenue.	33 9 11	924 10 8	958 4 7	891 10 2	66 10 5	
	Total	1,59,073 7 6	11,71,505 13 0	13,30,579 4 6	9,81,533 15 6	3,49,045 5 0	

Form No. 27. (Para. 82.)

FOREST DEPARTMENT, INDIA, ANDAMANS.

Outstandings and Liabilities on account of Contractors and Disbursers for 1917-18.

Division.	Department Debtor.			Department Creditor.			Balance due.	
	Opening balance.	Recoveries in cash and value of supplies and work done during the year.	Total.	Opening balance.	Payments made during year.	Total.	To Department (Outstandings).	By Department (Liabilities).
1	2	3	4	5	6	7	8	9
	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.	₹ a. p.
Andamans Division.	...	71,895 11 2	71,895 11 2	428 0 6	72,137 8 3	72,565 8 3	669 13 7	...
Total	...	71,895 11 2	71,895 11 2	428 0 6	72,137 8 3	72,565 8 3	669 13 7	...

(Para. 65.)

APPENDIX I.

Descriptive roll of Elephants in the Andamans Forest Division on the 30th June 1918.

Serial No.	Name of Elephants.	Sex.	Height. Feet.	Height. Inches.	Date of receipt.	Estimated age on 31st March 1892 or on date of arrival if arrived later.	Present age.	Number of year elephant has been working. Years.	Number of year elephant has been working. hs.	Condition.	Number of days. At work.	Number of days. At rest.	Number of days. Sick.	Cost price.	Remarks.
1	2	3	4		5	6	7	8		9	10			11	12
1	Australia	Female.	7	8½	Before March 1886	28*	54	32	...	Good	174	184	7	...	
2	Adolphus (Tusker)	Male .	7	11	Do.	23	49	over 32	...	...	84	139	108	...	Died on 27th May 1918.
3	Arnold Do.	,, .	8	8	Before July 1891	41*	67	27	...	Poor	310	55	...	...	Old, of very little use.
4	Hannah	Female	7	6	Do.	33*	59	over 26	...	Good	170	194	1	...	Old, of very little use.
5	Jangipur	,, .	7	10½	April 1891	28*	54	27	...	,,	...	365	...	3,025	Useless. Let loose since November 1915.
6	Aurangabad	,, .	7	8	May 1892	17	43	25	...	,,	267	86	12	2,530	
7	Bhokang (Tusker)	Male .	8	3	March 1894	36	60	24	...	,,	227	102	36	4,088	Old.
8	Sahpah Do.	,, .	8	5	Do.	33	57	24	...	,,	284	78	3	3,538	Old.
9	Mahpah	Female	8	...	Do.	33	57	24	...	,,	137	203	25	2,813	Useless. An aged animal.
10	Pagi	,, .	7	10	Do	32	56	24	...	,,	278	85	2	2,713	
11	Goolabi	,, .	7	9	March 1895	40	63	23	...	Poor	31	234	...	2,605	Useless.
12	Wellington (Tusker)	Male .	8	3¼"	Do.	35	58	23	...	,,	...	108	257	3,855	Bitten by a poisonous snake, since died.
13	Paul Do.	,, .	8	9	Do.	30	53	23	...	Good	256	102	7	3,763	
14	Bhairon Pershad Do.	,, .	8	4	December 1895	32	55	over 22	6	Poor	143	199	23	3,488	Old.
15	Bhairam Do.	,, .	8	7	Do.	28	51	22	6	Good	213	102	50	3,355	
16	Lily	Female	8	2	11th Feb. 1902	30	46	16	4	,,	262	103	...	4,523	
17	Meerut	,, .	8	4	Do.	27	43	16	4	,,	262	102	1	4,523	
18	Gulbadan	,, .	7	9	Do.	26	42	16	4	,,	188	127	50	4,523	
19	Delhi	,, .	7	10	Do.	26	42	16	4	,,	244	110	11	4,523	
20	Moti Malla	,, .	7	9	Do.	25	41	16	4	,,	263	89	13	4,523	
21	Gopal Das (Tusker)	Male .	9	2½	28th Jany. 1903	25	40	15	5	,,	281	77	7	6,215	
22	Sunder Pershad Do.	,, .	9	2½	Do.	25	40	15	5	,,	241	120	4	5,915	
23	Amir Do.	,, .	8	4	Do.	23	38	15	5	,,	277	81	7	5,915	
24	Lachmi Pershad Do.	,, .	9	2	28th Feb. 1903	30	45	15	5	Fair	250	95	20	6,415	
25	Sangeswar Pershad Do.	,, .	8	8½	30th Jany. 1905	30	43	13	6	,,	260	79	26	6,464	
26	Ganga Pershad Do.	,, .	8	8½	Do	25	38	13	6	Good	287	78	...	6,464	
27	Madho	Female.	7	10	26th April 1906	23	35	12	2	,,	223	141	1	6,312	
28	Mipu	,, .	7	1	21st Feb. 1907	40	51	11	5	Poor	121	243	1	4,972	Blind and useless.
29	Pawan Piyari	,, .	7	7	25th May 1911	42	39	7	1	Good	270	90	5	5,543	
30	Sunder Malla	,, .	7	1½	Do.	30	37	7	1	,,	157	208	...	4,893	
31	Botteswar	,, .	7	...	Do.	30	37	7	1	,,	202	108	55	5,093	
32	Latchmania	,, .	7	2	Do.	22	29	7	1	,,	286	78	1	4,693	
33	Meg Mala	,, .	6	8	Do.	20	26	6	3	...	18	12	20	4,392	Died on 19th August 1917.
34	Sudamani	,, .	7	3½	22nd June 1911	14	21	17	...	Good	275	90	...	3,250	
35	Hira Pershad (Tusker)	Male .	8	3	21st April 1917	40	41	1	2	,,	186	138	41	5,172	
36	Raja Do.	,, .	8	10½	Do.	35	36	1	2	,,	178	129	58	7,172	
37	Ranee	Female.	7	10	Do.	22	23	1	2	,,	180	181	4	4,772	
38	Jatta Shanker (Tusker)	Male .	8	6	Do.	35	36	1	2	,,	244	113	8	5,172	
39	Beaty (Makna)	,, .	8	2	Do.	25	26	1	2	,,	157	132	76	4,172	
40	Haig Do.	,, .	9	½	Do.	18	19	1	2	,,	191	170	4	4,172	
41	Kabutri	Female.	7	10	Do.	30	31	1	2	,,	167	198	...	4,672	
42	Champakali	,, .	7	3½	Do.	22	23	1	2	,,	234	131	...	5,172	
43	Rajmallah	,, .	8	1	Do.	35	35½	...	8	...	40	67	74	5,172	Died on 30th December 1917.
44	Rangmallah	,, .	7	6	Do.	30	31	1	2	Good	230	135	...	4,672	
45	Kishan Guz (Makna)	Male .	7	7	Do.	30	31	1	2	,,	193	112	60	3,672	
46	Maxie	Female.	7	7½	Born in Jany. 1886	6*	32	16	...	,,	275	76	14	...	
47	Chester Bahadur (Makna)	Male .	8	7	,, Augt. 1897	...	21	8	...	,,	265	91	9	...	
48	Schlic Bahadur Do.	,, .	7	10	,, Jany. 1900	...	18	5	...	,,	173	71	115	...	
49	Kana Kali	Female.	7	9	Arrived on 27th April 1918.	25	25	...	...	,,	...	65	...	3,168	
50	Parativa Kali	,, .	6	7	Arrived on 27th April 1918.	15	15	...	...	,,	...	65	...	2,868	
51	Manik Pershad (Tusker)	Male .	9	½	Arrived on 27th April 1918.	30	30	...	..	,,	...	65	...	2,468	
52	Kali Pershad Do	,, .	9	2½	Arrived on 27th April 1918.	30	30	...	...	,,	...	65	...	7,168	
53	Harriel Kali	Female.	7	7	Arrived on 27th April 1918.	25	25	...	...	,,	...	65	...	3,568	
54	Bir Bahadur (Tusker)	Male .	7	8½	Arrived on 27th April 1918.	15	15	...	...	,,	...	65	...	6,568	
55	Moti Guz (Makna)	,, .	7	11½	Arrived on 27th April 1918.	15	15	...	...	,,	...	65	...	3,768	
56	Sunder Kali	Female.	8	4½	Arrived on 27th April 1918.	30	30	...	...	,,	...	65	...	4,868	
57	Harihar Pershad (Tusker)	Male .	9	1	Arrived on 27th April 1918.	30	30	...	...	,,	28	30	7	6,268	
58	Champa Guz (Makna)	,, .	9	5½	Arrived on 13th June 1918.	30	30	...	...	,,	...	18	...	5,768	
59	Shamsher Guz (Tusker)	,, .	8	9	Arrived on 13th June 1918.	20	20	...	...	,,	...	18	...	5,768	
1	Jai Moti	Female.	5	11½	25th May 1911.	2½	9½	...	...	Good	...	365	...	375	Calf of Dharam piyari.
2	Nur Jihan	,, .	5	7	Born in Mar. 1914	...	4	...	...	,,	...	365	...		
3	Diana	,, .	3	9	Born on 7th July 1916.	...	2	...	...	Fair	...	365	...	...	
4	Victoria	,, .	3	1½	Born on 24th Dec. 1917.	...	½	...	...	Good	...	189	...	...	
5	Thebaw	Male .	3	2½	Born on 22nd Nov. 1917.	...	½	...	...	,,	...	221	...	...	
6	Moti Lal	,, .	5	4	Arrived on 27th April 1918.	4	4	...	...	,,	...	65	...	1,000	Calf of Kusum Kali.

* Estimated age on 31st March 1892.

NOTE.—Three elephants, *viz.*, Farrington, Provabati and Kusum Kali died during the year in Buxa Division.

APPENDIX II.

(Para. 65.)

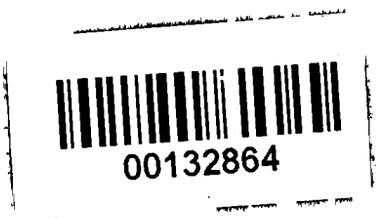
List of local born elephants and their parentage.

Serial No.	Name of local born elephants.	Sex.	Date of birth.	Present				Parentage.						Remarks.
				Age.	Height.		Condition.	Sire			Dam.			
					Feet.	Inch.		Name.	Present age.	Date of arrival in Andaman.	Name.	Present age.	Date of arrival in Andaman.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Maxie	Female	January 1886	32	7	7½	Good.	Not known	Not known	Not known	Bashful	Died on 21st July 1902.	Not known	A good timber dragger.
2	Chester Bahadur	Makua	25th August 1897	21	8	7	,,	Lancer	Died 13th April 1899.	Before March 1886.	Australia	54	Before March 1886.	A good timber dragger.
3	Shlich Bahadur	Do.	15th January 1900	18	7	10	,,	Morning Glory	Died 28th December 1898.	April 1891	Australia	54	Before March 1886.	A fair timber dragger.
4	Nur Jahan	Female	March 1914	¼	5	7	,,	Gopal Das	40	28th January 1903.	Gulbadan	42	11th February 1902.	Not yet at work.
5	Diana	Do.	7th July 1916	2	3	9	Fair.	Lachmi Pershad	45	28th January 1903	Hannah	59	July 1891	Do.
6	Thebaw	Male	22nd November 1917	½	3	1½	,,	Schlich Bahadur (locally born).	18	Born on 15th January 1900.	Sundermala	37	25th May 1911	Do.
7	Victoria	Female	24th December 1917	½	3	2½	Good.	Sangeshar Pershad	43	30th January 1905.	Australia	54	Before March 1886.	Do.

DATED PORT BLAIR,
The 25th October 1918.

F. H. CAVENDISH,
Deputy Conservator of Forests, Andamans Division.

SGP13—10R&A—24-3-19—170.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